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**MAKERERE**



**UNIVERSITY**

# **PARTNERSHIPS IN NATIONAL DEVELOPMENT**

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*Building For the Future Together*

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**Papers for the Stakeholders Meeting**

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**26th April 2006**

# The Makerere University Institutional Development Program

By

Professor L.S. Luboobi  
Vice Chancellor

## Executive Summary

Makerere University continues to be the leading institution of higher learning in the region. This position has been enhanced through the Institutional Development Program which it has been implementing over the past six years.

There are several contributors to the this program; these have ranged from the Government of Uganda which contributes to the Recurrent and day to day activities of the University to our development partners and the private sector through Appropriation in Aid from fee paying students. These have enabled Makerere to tackle its main priorities as spelt in the strategic plan 2000/01 – 2006/07.

Mileage has been covered under the area of ICT which is one of the critical priority areas in the Strategic Plan is supported by the Norwegian government, Sida/SAREC, Carnegie Corporation of New York at the institutional level. Internally generated funds and Government of Uganda contribute toward the day to day recurrent and maintenance costs. The University is geared toward embedding ICT in its core activities of research, teaching and learning, governance and increased access to library resources.

Increased University relevance in the policy and public arena has been through research. The core support for research comes from Sida/SAREC under the theme “*Lake Victoria and other Water Sources*” and NUFU under the agreement for strengthening the competence of universities and research institutions in developing countries. NUFU and Sida/SAREC research also targets science based disciplines such Medicine, Agriculture, Technology, Science. This support also includes the Faculty of Social Sciences. Focusing on science based disciplines has created a palpable gap on research as far as the humanities are concerned.

Besides Sida/SAREC and NUFU, Norwegian Government, Carnegie and World Bank/Rockefeller Foundation have put up substantial support for research. Library resources have been improved including ICT and electronic books and journals with support from Norwegian Government, Sida SAREC and the Carnegie Corporation of New York.

With regard to Science based disciplines, as noted above, the research aspect is being catered for. Physical Infrastructure and improvement of space on the other hand was provided by Norwegian Government and Pfizer

Inc. This included the Faculty of Computing and Information Technology, the Department of Food Science and Technology and support to the Agricultural Research Centre at Kabanyolo, MUARIK by Norwegian Government and the Infectious Diseases Institute by Pfizer Inc. There is an urgent requirement for space expansion particularly in the area of large lecture rooms and computer laboratories, extension of the Library and there is need to modernize laboratories for all science based faculties.

There has been considerable investment by both government and the development partners in Gender Mainstreaming. The University Gender mainstreaming division is now operational with sentinel sites in all planning units and halls of residence using support from the Carnegie Corporation of New York. A new building for Gender and Women Studies was put up under Norwegian Government support. Carnegie Corporation strongly supported the Gender Mainstreaming activities including the Female Scholarship Initiative. Achieving gender balance is however a long term goal and it calls for continued support in the years to come.

The main thrust with regard to Good Governance and Human Rights has been through the World Bank/Rockefeller Foundation Program on development of Human Resources for Decentralized Service Delivery which is known as the [I@mak.com](http://I@mak.com) program. This has focused on improving the district service delivery which is instrumental in poverty eradication. There are, however, several critical aspects with regard to Good Governance and Human Rights particularly the role of that the University can play in a multi party governance environment for which support in is still vital.

To consolidate these gains made in the implementation of the Institutional Development Program several key policies have been developed or are in the advanced stages of development. These policies have been the HIV/AIDS Policy; the Sexual Harassment Policy, the Gender Policy and College Statutes Policy and the Investment Policy.

The University over the next planning period is geared towards further research and development including alternatives in energy generation , equipment and infrastructure development, practical orientation of graduates, partnerships and marketing and image building.

## 1.0 Introduction

The University Institutional Development Plan derives out of the Makerere University Strategic Plan 2000-01-2006/07. The overall goal of this University's Strategic Plan is *sustainable and equitable social, economic and technological development in Uganda*. The plan situated Makerere within the national and global context and created the challenge for the University to establish its relevance to the needs of society while taking into consideration issues of quality and equity. The dynamism of the University has manifested in the response to the challenges created by the changes taking place at both the national and international level. Several partnerships have been created to foster the development of the University. These partnerships have helped the University to redefine and emphasise its role as a key player in national development. The support obtained from these and other development partners has reinvigorated academic programs, expanded space, provided input into research, enabled the University to train staff at PhD and Masters level, created both national and international synergies towards a common goal and improved access to education for girls.

These developments have come with challenges and trade offs. Key among these is the challenge of sustaining the momentum for reform without compromising the role of University education in national development. Predominant among these factors is the trade off between access and equity on the one hand and realistic cost for quality on the other. It has also created the need for Makerere as the first and largest University in Uganda to re-examine its role in relation to other universities.

This is now the appropriate time for the University to reflect, evaluate and consolidate the gains made in line with our vision and Mission:

- *Vision : To be a centre of academic excellence, providing world class teaching, research and service relevant to sustainable development needs of society*
- *Mission Provide Quality teaching, carry out research and offer professional services to meet the changing needs of society by utilizing world wide and internally generated human resources, information and technology to enhance the University's leading position in Uganda and Beyond*

## 2.0 Key Benchmarks in the Institutional Development Process

While the University's institutional development has involved a broad range of strategies and activities which directly impact on the University, our ultimate goal is not

a Strengthened University but rather an indication of the results/achievements/impacts that are expected as a consequence of strengthening the University. This includes but is not limited to

- quality graduates in sufficient numbers and relevant to the national human resource needs
- successful results of the University's efforts in research,
- Extension and consulting services, and Makerere University playing an influential role in developing public policy.

Makerere University's ultimate aim has been to make significant contributions towards sustainable and equitable social, economic and technological development in Uganda. We have slowly moved towards this target. The opening of doors to private students has provided lessons for public private partnership. This has ignited an irreversible process of transformations; it has created a snow ball effect within the entire higher education sector. It has opened room for demand driven curriculum, and a number of innovations that propel the University towards increased relevance through internships and field attachments. It has indeed enhanced the University key mandates of teaching and learning, research and service to the community. Additionally, the University through gender mainstreaming has been at the forefront of championing opportunities to women. 42% we have moved from an average of 20% to about 35% in 1998 to an almost parity level of 44% by 2005/06 of female enrolment<sup>1</sup>.

Changing the dimensions and thinking of the University has led to breaking down of barriers and expanding frontiers. Makerere is now collaborating with other universities to improve the quality and relevance of the graduate.

Key stakeholders and development partners in University transformations through the Institutional Development Plan have been, Government of Uganda, Parents and guardians of students, donors, staff and students.

The University has endeavoured to pursue a balanced development of its capacity and performance in order to be able to respond to changing demands of the environment. The University Development Program was therefore geared towards seven thematic areas vis

1. Teaching and Learning
2. Research Development
3. Extension and Consulting services
4. Infrastructure Development
5. Organisation Development
6. Human Resource Development
7. Financial Resource Management and Diversification

<sup>1</sup> There are other reasons for the increase in numbers overall. Up to 1995, Makerere was a fully state funded university. Opening up the door for privately sponsored students has widened access channels for both males and females (3/4 of students are self-sponsored). Many more courses are now on offer since some of these courses can be self-supporting, new modes of service delivery such as distance education, evening classes, etc. have contributed to the soaring numbers too..

However, in order to maximise impact and utilisation of limited resources coupled with the University's critical reflection of the nation's needs, the University has over the last five years laid emphasis on building capacity through the following prioritised areas:

- Information and Communication Technology;
- Library Services;
- Research;
- Science Based Disciplines (Agriculture and Livestock Management, Health Sciences, Science and Technology, Environment and Nature Conservation);
- Good Governance and Human Rights;
- Gender Mainstreaming.

## 2.1 Research Development in the University

The University continues with its research agenda which is key to the national Poverty Eradication Action Program (PEAP) and the Millennium Development Goals at the Global level. This agenda has specific and cross cutting areas that include:

- Research into education for development linked to the Government initiative towards Universal Primary Education in particular and the policy on Education;
- Food, nutrition and value addition linked to the Plan for the Modernization of Agriculture, the Fisheries Policy and the nascent policy on the use of genetically modified organisms;
- Sustainable environmental development linked to the implementation of the National Environmental statute, 1995;
- Good government, equity (including gender), service delivery, linked to the National objectives and Directive Principles of State Policy contained in the Constitution of 1995, the Local Government Act, 1997, the Inspectorate of Government Statute of 1988 as amended and the Uganda Human Rights Act;
- Health (infectious and lifestyle related diseases);
- Natural resources utilization and conservation in line with the National Environmental Statute, the Forestry Act and Fisheries Policy and
- Information Communication Technology for Development.

Additionally, the University has identified research priorities of a cross-cutting nature covering:

- Appropriate technology;
- Economics;
- Biotechnology;
- Methodological studies and
- Research for staff development.

With this research agenda the University has witnessed improved research coordination; capacity has been built within the Graduate School. The Demographic Surveillance Site has been operationalised as well. This site identified in 2001 in Iganga/Mayuge districts is used for conducting studies not only related to medical issues but to research involving agriculture, social sciences, and technology.

### Specific contributions include:-

#### a) In the area of food and nutrition,

Researchers in the Faculty of Agriculture continued engaging farmers as participants in research and development of technologies that are appropriate to the rural settings. More research proposals geared toward improving access to markets, generating new crop varieties, improved methods for natural resource management and adding value to agricultural products were developed. The Faculty hosted or co-hosted several conferences and workshops. One resulted in a book titled "Agriculture and the nitrogen cycle: assessing the impacts of fertilizer use on food production and the environment". The Faculty of agriculture, through the department of Food Science and Technology is exploring ways of putting up a food and value addition centre, this centre will act as an incubation unit which will link the University and the private sector in adding value to existing technologies.

Key among technology development and transfer has been the development and release of two high yielding and rust tolerant soybean varieties (Maksoy IN and NAMSOY IN) in response to the devastating rust epidemic ravaging the east and southern Africa region by the Faculty the Faculty of Agriculture with support from FORUM. The Faculty has also developed four high yielding cowpea varieties which have been submitted for national release

Other areas of food and nutrition with support from the I@mak.com particularly in the Dept. Food science and Agriculture include Authorship of a Foods and Nutrition Introductory Book, and an Integrated Training of Agricultural Extension staff in food and nutrition security.

b) **Sustainable environmental development** linked to the implementation of the National Environmental statute, 1995; has been operationalised with support from Sida/SAREC. The faculties of Technology, Agriculture, Social Sciences are involved in research related to environmental management some of these research include

- Development of Appropriate and Environmentally Friendly Architecture around the Lake Victoria Region
- Characterisation of High Temperature Ceramic Materials in Uganda Water Quality Management and Pollution Control in Uganda
- Sustainable Energy for Rural Development
- Solar PV as Part of a Dynamic rural electrification Strategy in Uganda.

- Urban Crop Waste Soil Fertility inputs in urban and peri-urban agriculture systems
- Socio-economic implications of market waste utilisation in urban and peri-urban agriculture
- Integrated pest management in marked cropping/livestock systems in urban and peri-urban areas of lake Victoria Crescent Region



Research towards the use of DDT in the fight against malaria has also been undertaken.

One of the cutting edge research in health by the university was the Research that administration of Nevirapine to pregnant mothers reduces mother to child transmission (MTCT) of HIV from 30% to 15%, by the Faculty of Medicine This work has resulted in the establishment of the PMTCT service by Ministry of Health. Nevirapine is now utilized widely for PMTCT in many countries in the world.

- d) **Research into education for development** linked to the Government initiative towards Universal Primary Education in particular and the policy on Education has been undertaken as a collaborative arrangement between the Makerere University Faculties of Education and Technology, the Makerere institute of Social Research, Kyambogo University and Nakaseke core PTC with support from the Rockefeller Foundation. This research aims at establishing and piloting means to keep the girl child in school.
- e) Collaborative Research and Linkages with other Universities



In line with global trends, Makerere has taken bold strides in the area of joint research and other collaboration endeavours with various Universities all over the globe. Through Sida/SAREC support Makerere is collaborating with various Swedish Universities and Research Institutes to build capacity for the PhD supervision and carry out joint research in the faculties of Technology, Agriculture, Medicine, Social Sciences, Veterinary Medicine, EASLIS and the Institute of Public Health. This collaboration will also facilitate Ph.D. training of over 25 members of staff at Makerere University.

*Fish Farming and soil management kits to increase outreach and service delivery in food and nutrition in the Faculties of Agriculture and Vet Medicine*

The Faculty of Medicine has registered remarkable success in forging linkages with the Walter Reed Army Institute, Henry Jackson Foundation, Gates Foundation, the University Of California San Francisco Of USA and the Karolinska Institute of Sweden on its research program on the deadly disease of HIV/Aids and Malaria control.

- c) **The area of health (infectious and lifestyle diseases)** has been operationalised through the Infectious Disease Institute. The large patient base at IDI provides excellent opportunities for research, which is central to improving care, prevention, training, and laboratory services. Current research is being conducted in the areas of clinical trials, operational research, prevention, and lab-based research. The research outcomes will help to improve the ways in which care is provided in Africa and improve the health outcomes of those living with HIV/AIDS and most at-risk of HIV transmission.

International collaboration is not restricted to research and staff development, it also embraces the core area of training. For example, Makerere through the faculties of Computer Science, Forestry and Nature Conservation and Arts is engaged in joint degree awards with some Norwegian Universities. Norwegian students come to Makerere University for one Semester for both Bachelors and Masters Degrees and they get part of their credit Units from Makerere. Ugandan students also take part of their studies in Norway and they get joint degrees. The reports we get on joint teaching and research clearly indicate that Makerere University standards are at par with those from European Universities.

## 2.2 Increased research and teaching capacity through ICT

University effort to modernize and build capacity for the increased enrolment levels has been through ICT. Modernizing instruction and learning has created an opportunity for access to quality education through E-learning. ICT has included the development of infrastructure for research, organisation and development, library and access to reading materials, communication and linkages at the University, national and international levels.

### Key development have been

- Library ICT infrastructure, Equipment (*Computers, security and surveillance systems, tattle tapes*); Retrospective data conversion, Ensuring the availability of user networked computers in the Main Library and all sub-libraries; includes the necessary servers for local mirroring or short-term caching
- Information System II: (*Addressing the Academic Records, Finance and Library Information Systems*) and developing the student Web Module to enable student access to their academic records. This has involved the acquisition of Internet Application Server Unlimited License required for the ITS system for ARIS, FINIS and HURIS, Enabling access to administrative systems by all staff and students
- Equipment, Procurement and installation of a central database server, a VSAT and bandwidth access to cheaper Internet bandwidth through consortia approaches equipping the pilot faculties of faculties (Science, Technology, Computer Science, Medicine, Women and Gender) with sufficient net-worked computers to implement E-learning and assuring continuity and availability of services
- Local Area networks and Computer labs in various Faculties: Ensuring that all academic and administrative buildings, and to a limited extent halls of residence have local area networks with wired and/or wireless access.
- Student computing resources: Equipping existing space in various faculties as well as the general purpose computer labs with networked computers to enable access by students to online resources for research and e-learning
- Training and imparting skills, to all front line users
- Establishment, equipping and capacity building to respond to the ICT policy on developing in-house applications as well as Establishing a software development unit. ICT development has additionally involved establishment of Multimedia lab
- Setting up a facilities for multi-media learning material production and video-conferencing

### Key Partners in ICT Development are given in the table below

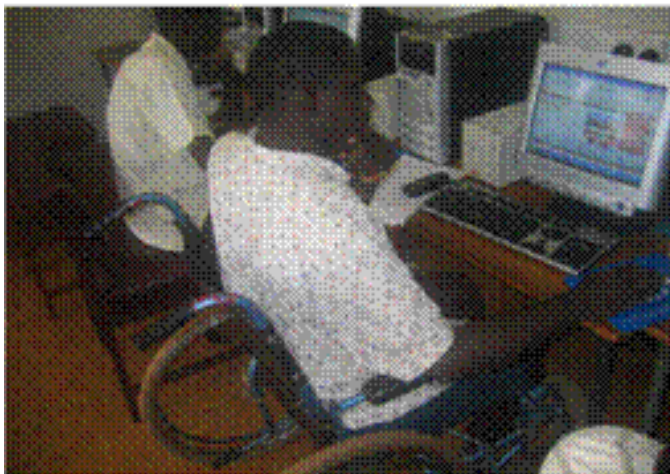
	Donor	Description of donation
1	Uganda Telecomm Ltd ●	Students' computer Lab located in the Main Library (60 computers, 1 Printer)
2	Rockefeller Foundation	● LAN for the Faculty of Agriculture
3	Ford Foundation	● E-learning lab (LAN, computer equipment and personnel) for the Faculty of Social sciences
4	USAID ● ● ●	Wireless Network backbone for 26 University faculties· Internet Bandwidth (128kbps) for a 1-year period Set up of Network operations center (Servers, power backup and all accessories) Equipment for EDDI digital library project
5	Hewlett Packard	● Switches and hubs for various LAN installations
6	Carnegie Corporation ● School, University units	Book Check system for the Main Library· LANs for the Libraries at Medical, Education and MUARIK· Computer equipment and LANs for various Library Scientific project
7	Republic of China	● Computers equipment and LAN for the Institute of Computer Science
8	NUFFIC ●	Training of Trainers (E-learning)
9	Norwegian Government ● ● Information systems	● Administrative computing (LANs, computers for University administration)· LANs and computers for various faculties (ICS, WGS, Education, PDD, ICS)
10	Sida/SAREC ● ● ● ● ● ● ●	Makerere Network project (MAKNET) Email/Internet Project (EMI) DICTS project End User Training project· Library Information System Computer equipment and LANs for various Faculties (Technology, Social Sciences, Agriculture, Medicine) Student Internet kiosks Support to Internet bandwidth subscription
11	GOU and Internally Generated	● Recurrent activities, subscriptions and Maintenance of the established ICT networks

## 2.3 Library Resources

An important element is the development science as well as humanities is library services. The University would like to see that the initiatives taken in the recent past which include; expansion of ICT facilities, access to electronic journals, acquisition of journals and books, staff training at various levels and space expansion are continued.

With Support from Sida/SAREC, Norwegian Government ,Carnegie Corporation, Association of African Universities (AAU), DFID/British Council, Dreyfus Health Foundation (DHF), USA, and Uganda Telecom. The Library resources in the University have increased notably

- a) Information and Communication Technology (ICT) infrastructure, Electronic Document Delivery Service (EDDS) and 261 networked computer in laboratories and other server points, one laboratory on Level three of the Main Library (near the entrance) reserved for students with disabilities.
  - Access to electronic journals Science Citation Index Abstracts in CD-ROMs, edition 2004 was purchased under the Carnegie Corporation of New York funded project Phase I.
  - 1636 volumes of books (910 titles) in the fields of science and gender were received under the Carnegie Corporation of New York funded project Phase I.
  - 24,898 volumes of books for the library and Book Bank were purchased using Uganda Government funds.
  - The Makerere Library Information System MakLIBIS, is one of the information systems which has been designed to facilitate library resource access and management.



*Disabled students access to library Resources*



*Architects View of the Completed Library Building*

- b) Several initiatives have been undertaken Reorganize and Renovate the Library these include
  - Reorganization of the Book Bank and IDA Sections in December expanded the seating capacity in the IDA Section by about 200 seats.
  - Revival of the Browsing and Leisure Area on Level three of the Main Library provided a relaxing area for Library users.
  - Renovation of the University Librarian's Office was done, including replacement of old office furniture.
- c) With a diversified resource we have embarked on the extension of the Main Library, this will increase the seating capacity from 1000 to 3000.

## 2.4 Science Based Disciplines

The major governing parameters for the University institutional development plan were

- the growth in student enrolment;
- the national requirement for building a critical mass of Science and Technology and Research Development
- Human resources capacity development
- A crucial aspect of the process is the funding of the University's operations and expansion, where the University's income generation from fee-paying students represents an increasing portion of the total operational and investment budgets.

### 2.4.1 Curriculum Development

With specific reference to building a critical mass of Science and Technology and Research Development the University has focused towards the Faculties of Medicine, Agriculture, Technology, and Veterinary Medicine. Development of this critical mass is limited by the stock from the secondary education and brings out the need to start with grassroots capacity for science education. While the research aspects have been given in section 1.2 above, science focus also included curriculum and human resource development.

Several new demand driven Curricular have been developed, while some in some cases these have been reoriented to focus some modules on the market requirements, more than 30 new programs have been developed. Among these are those that increase access. These programs without boundaries include:-

- Establishment of the Bachelor of Science Education distance program to enable science teachers who have diploma access University education and build capacity in secondary school for science education
- Problem based learning in the Faculty of Medicine
- Distance, Masters of Public Health
- Three market driven programmes (i) quantity surveying, (ii) valuation surveying (land economics) and (iii) construction management were established

Curriculum developed is a continuous process and is embedded within the overall University programs. Several systemic innovations through the [i@mak.com](mailto:i@mak.com) have focused on demand driven curricular from the perspective of the users of University programs. These cut across the humanities and the sciences. The University is committed to engage the practicing professionals in curriculum development to ensure relevance to market needs. The University is also exploring mechanisms through which access can be enhanced without compromising the quality.

## 2.4.2 Quality Assurance

Makerere University has demonstrated remarkable resilience to maintain high academic standards despite the big challenges with which it is faced. The new management has made it its priority to put impetus on assuring quality.

- A Quality Assurance Task Force headed by the Deputy Vice-Chancellor (Academic Affairs) has been assigned the duty to work out the Quality Assurance Framework and steer the process of quality assurance by providing guidelines, structures, policies and implementation modalities. This task force is now moving towards establishing a quality assurance unit which will among other activities, harmonise the course modules offered by the different University units. This form of rationalization is expected to reduce the workload of the staff, and ensure that they engage in other development activities particularly research to influence public policy.
- In view of the critical needs for educational inputs such as high calibre academic staff, scientific equipment and educational software, the University has re-examined its sources of income and decided to improve its financial income. Key measures include
- Negotiating with Government to increase its subvention to the University,
- Revising the fees to reflect the realistic unit cost of educating students.

- Setting up a resource Mobilization Unit with support from Carnegie Corporation and the Norwegian Government.
- Development of an investment policy that will attract resources particularly from the private sector.
- In line with the provisions of the Universities and other tertiary institutions Act the university moving towards accreditation of academic programs to international organizations for example programmes in the Faculty of Technology are accredited by international professional organizations including the commonwealth Association of Architects and the Royal Institute of Engineers.

The impact of these measures will be gradual starting with the first year, but will eventually work throughout all the years and revamp the current low levels of investment in academic standards of Makerere University.

## 2.4.3 Development of teaching capacity

### a) Human resource development

The University still has the challenge of adequate staff to teach and supervise graduate students for their research and also conduct research. This problem is particularly acute in the Faculties of Medicine, Social Sciences, the Institute of Psychology, School of Education and the Business School, where there is a heavy load of teaching done by practicing professionals and part time lecturers.

Human resource development has been one of the key tenets of the development of quality and teaching capacity in the University. Human resource development cuts across disciplines and covers both the science and the humanities. The bulk of support for research in the University through the graduate school is therefore restricted to Postgraduate degrees at Masters and PhD levels. The University is implementing the recommendations of the Akiiki Mujaju report which requires that the minimum qualification of the lecturer is a PhD. Consequently the University has concentrated on building a critical mass postgraduate holding particularly of PhDs. This training includes local, international as well as sandwich programs.

Staff development has also included support for regional and international conferences. Staff development has been supported by Sida/SAREC, Norwegian government and NUFU, Carnegie Corporation of New York, Rockefeller Foundation/ World Bank and other bodies such as the AERC and DAAD that have been funding individual staff. There is reasonable contribution through the Staff Development Fund from Internally Generated funds. The table below gives a brief about some of the major development partners involved in Staff development status (2001-2005)



Program Fund	No. of staff on Ph.D study
Sida/ SAREC	70
Norwegian Gov't/ NUFU	20
I@mak.com	18
Carnegie Corporation of New York	38
Staff Development Fund	51

Over the past 6 years, Development Partners have funded postgraduate training of the University staff. About 205 members of staff have been supported through scholarships in postgraduate training. Out of 205 members who have been supported by development partners for postgraduate training, 134 were on PhD training representing about 65% while the rest were on Masters Programmes.

Over the same period, the Government of Uganda supported 70 members of staff in their research undertakings, which led to the award of higher degrees.

Through internally generated income the University also supports human resource development. Support to human resource development by the University is through the staff development fund and waiver of tuition fees

Staff attrition continues to be a big challenge as the staff leave University employment after attaining the qualifications. We hope that the recent boost in remuneration from the Government of Uganda will reduce the exodus of staff from the University.

## 2.5 Bridging the Gender Gap

The University is moving forward in increasing access to disadvantaged groups with specific reference to gender and persons with disabilities. This is not only limited to a move towards parity in enrolment but extends to service delivery. Carnegie Corporation of New York and Norwegian support has been instrumental in gender mainstreaming within the University. Research through a collaborative arrangement between, Makerere University, Kayambogo University and Nakaseke Primary Teachers colleges an initiative is ongoing to keep the girl child in school.



*Beneficiaries of the Female Scholarship Initiative First Cohort 2001*

This has been possible with support from Rockefeller Foundation. The Gender Mainstreaming Programme got an extension of the female Students Initiative and the Gender Mainstreaming project to 2007. The female scholarship initiative, which sponsors female students from poor and disadvantaged background, has so far benefited 417 female University students. Sensitisation workshops on Gender were conducted and research on the 1.5 scheme was conducted. Through the Gender Mainstreaming Division which was created in 2002, the activities of the Gender Mainstreaming Programme have continued to expand; sentinel sites have been established in all University planning units.

The university continues with the affirmative action for female with an additional 1.5 points to their university entry grades. This has enabled females to gain access not only to the university but also to professional programs.

## 2.6 Good Governance

The University works under the premise that University role should extend to influencing the governance structure at the national level. This covers the socio – economic, political and geographical systems as they affect the populace. University involvement in this area has been through the government policy of decentralisation. The University has focused on building capacity in local government staff to facilitate services delivery through the governance structures established under the decentralisation policy. Through this capacity building program University staff have been involved in research that is aimed at influencing public policy, and increased technical accountability by the civil servants in the local governments. The University has at the same time created sustainability mechanisms through integrating the findings and requirements into University curricular. This projected the University as more relevant to community needs. Additionally University involvement in the good governance and human rights has been geared towards revitalising University influence in public debate by both staff and students.

## 2.7 Organisational Development

### 2.7.1 New Leadership

The University is now fully Autonomous through operationalisation of the Universities and Other Tertiary Institutions' Act 2001. This transition was completed through the appointment of the Vice Chancellor and his two Deputies by Senate and Council and filling all the other vacant positions in top management. Prof. Livingstone S. Luboobi, the Vice Chancellor, Dr L. Tibatemwa-Ekirikubinza and Prof. D.J Bakibinga the Deputy Vice Chancellors for Academic Affairs and Administration and Finance respectively, were the first democratically elected leaders since Makerere University's inception in 1922.

The new leadership has put renewed vigour into improving academic standards through searching for more resources and focusing on quality assurance, promoted closer international collaboration, advanced the computerization process already launched and continued the bridging of the gender gap through gender mainstreaming

### 2.7.2 Restructuring of the University and Establishment of Colleges

Following the recruitment of the new top leadership, the University moved on to tackle its restructuring process so as to bring in more efficiency. Functions under the new offices of Deputy Vice Chancellor Academic Affairs and Deputy Vice-Chancellor Finance and Administration, vis-à-vis those of the Vice-Chancellor, Academic Registrar and University Secretary were redefined in accordance with the 2001 Universities and Other Tertiary Institutes Act.

The restructuring brought on board the following Units:

- The Human Resource Department under the Deputy Vice Chancellor (Finance and Administration)
- The Procurement Unit under the University Secretary
- New structure of the Public Relations and International Affairs Office directly under the Vice Chancellor.

### 2.7.3 Creation of Constituent colleges

While administrative Units are undergoing restructuring, academic Units are being re-organized into larger Units of Colleges with significant devolution of power to the Colleges. The University Council has in principle committed itself to moving towards moving to a devolved governance structure. A task force for college formation has been established under the DVC Academic Affairs to oversee the process for establishing new Colleges. The college statutes are being revised and the College of Health Sciences is expected to be one of the first Colleges to be established under these new guidelines.

## 2.8 Partnerships

In consonance with the New Partnership for Africa's Development (NEPAD) goals the University has moved forward to initiate and sustain national, regional and global partnerships.

### 2.8.1 National Networks

The capacity building program for decentralization has brought together key players in higher education in Uganda. These include Government of Uganda, local governments, Makerere University, six private and public universities in Uganda and one degree awarding higher education institution. Developing of an innovative model for collaborative partnering with other suitable training and research institutions across Uganda, with the goal

of including valuable inputs in curriculum development and expanding the outreach and coverage of relevant training programs; This program that targets service delivery in the areas of health, education, good governance, financial management, education and engineering, has been instrumental in changing the mindset of the higher education sector from competitors to service providers with a common goal, that targets the role of University education in terms of research, relevant curriculum and policy influence and universities relate to civil society and the localities where they are situated.



*Regular open days are held to expose and link the University to the community*

### 2.8.2 Regional Networking

Makerere University is a host to several regional programmes. For example, in January 2004, Makerere University and 11 other universities in east and southern Africa took over the management of one of the most successful regional capacity building programmes, *Forum on Agricultural Resource Husbandry*, and transformed it into a regional Network organisation, the *Regional Universities Forum for Capacity Building in Agriculture (RUFORUM)*. Because of Makerere University's exemplary leadership and transparent management, Makerere was selected to host the RUFORUM Regional Secretariat. Makerere University is not only hosting the Secretariat but supporting capacity building efforts for the entire Eastern and Southern Africa region, and is working together with other stakeholders and the regional governments to mobilise support and resources for graduate training and research in African Universities.

Key activities to foster networks and development have included:-

- Makerere University with the support of the Uganda's Ministry of Education and Sports hosted a meeting of the Ministers responsible for Education in the Eastern and Southern Africa region.
- Makerere hosted a meeting of 12 Vice Chancellors which has resulted in a Joint Memorandum of Understanding (MOU) to facilitate students' and staff exchange in the region. Through this MOU, Makerere University staffs are now honorary staffs of 11 other universities and students from one Member University shall pay local fees in other member universities.
- Through this arrangement, Makerere and other universities are working hand in hand to develop cost-effective quality PhD training programmes (course & research) that will pool the best human resource within and outside the region.

The Faculty of Technology is part of the regional research collaboration between engineering Faculties at Dar-es Salaam, Eduardo Mondlane, Makerere University and the SEARCH project which includes 6 Schools of Architecture in eastern and Southern Africa.

These efforts represent Makerere University's commitment to train quality graduates for the region and to partner with others in our noble goal of *Building for the Future*.

### 2.8.3 International networks

Support to the institutional development programs through Sida/SAREC, Norwegian Government/ NUFU and Rockefeller Foundation World Bank have all been geared towards international partnerships. These have included.

- Joint supervision of PhD research between Makerere University and universities in Sweden and Norway.
- Joint research works
- Staff and student exchange programmes
- Establishing institutes of excellence through benchmarking best practices in more developed universities in the region and far east and the west.

## 3.0 New Horizons:

### Responding to the challenges

Makerere University is fully aware of the need for several other reforms in teaching including the need to review our class size, the balance between undergraduate and post graduate, the mobility between disciplines including sciences and humanities and the development of a full fledged Semester. Some of these issues are being tackled with a more holistic approach while others will be

addressed during the next strategic Plan after the Ministry of Education has adopted the overall plan for higher education in Uganda. The key areas earmarked to facilitate this development are

### 3.1 Research and Development

In the research arena the University is geared towards

1. Partnerships for Research and Development for the Private sector with specific reference to the industrial and service sectors.
2. Empowering research centers and developing research expertise and specialisation through effective coordination and facilitation channeled through the Graduate School.
3. Linking research findings to national development goals as well as teaching within the University.
4. Dissemination of research findings and target towards utilization of research informations generated by the University Staff and Students
5. Further Strengthening the Research Management and Coordination System (Rmacs@mak) at Makerere.
6. Developing Faculty-based research in conjunction with the Uganda National Council for Science and Technology which is relevant to local, national and international issues.
7. Institutionalising Intellectual Assets/Property Rights Management geared towards transferring findings to the private sector.
8. Multi disciplinary research under the prioritized thematic areas, specific reference will be paid to governance and human rights in the multi party era.

The University will specifically respond to the research agenda highlighted by the Poverty eradication action Plan in the Ministry of Planning and Economic Development.

PEAP Goal	Priority	Research Themes
1 Economic Management	➤	Economic growth
	➤	Public expenditure
	➤	Fiscal deficit
	➤	Labor Market dynamics
	➤	Income inequality
2 Enhancing Production, Competitiveness and incomes	➤	Agricultural productivity
	➤	Agricultural advisory services
	➤	Small medium scale enterprises
	➤	Land tenure and utilization
	➤	Strategic exports
	➤	Pastoralism
3 Security conflict resolution and disaster management	➤	Causal factors underlying conflict
	➤	Cost of service delivery
	➤	Internal displacement
4 Good Governance and Policy	➤	Institutional proliferation*
	➤	Decentralization
	➤	Taxation Efficiency and effectiveness in service delivery
	➤	Transparency and accountability
5 Human Development	➤	Infant and maternal mortality
	➤	Service provisioning
	➤	Population
6 Broader thematic issues	➤	Gender
	➤	Vulnerability and social protectionØ
	➤	Chronic poverty
	➤	HIV/AIDS

### 3.2 Information and Communication Technologies

While there has been some mileage covered under ICT development, several challenges particularly for Sustainable management of ICT resources, the operational risks, and likely escalating costs of poor Information Resource Management. Limited access to ICT resources have developed. University therefore is geared towards:-

1. Modernizing instruction and learning and creating increased opportunity for access to quality education through E-learning. An E-learning policy is the new addition to the revised ICT policy of the University.
2. Achieving the full potential of efficiency gains by ensuring that the University community has got easy access to computer resources that will have a ubiquitous presence on campus by the end of 2009.
3. Mitigating the risk of failure in a highly computerized environment
4. Human Resource Development for ICT staff.
5. Improving the Library ICT infrastructure



*Bridging the gender gap and improving ICT resources*

### 3.3 Equipment and Physical Infrastructure:-

#### 3.3.1 Classroom, Library and Laboratory space

Physical Infrastructure and improvement of space on the other hand was provided by Norwegian Government and Pfizer Inc. This included the Faculty of Computer Science and Information Management, the Department of Food Science and Technology and support to the Agricultural Research Centre at Kabanyolo, MUARIK by Norwegian Government and the Infectious Disease Institute by Pfizer Inc. The University has now moved towards space development for the Faculty of Technology with and the extension of the Library and development of mass lecture halls in the Faculty of Computing and Information Technology.



*Faculty of Economics and Management One of the new buildings from Internally generated fund (one floor was contributed by the ACBF)*

#### 3.3.2 Equipment

These initiatives for building capacity for science related disciplines have moved the University to new heights and Makerere University is still committed to the development of capacity in teaching science and technology. To add momentum into this effort, the University would now want to target the modernisation of science laboratories. The requirement includes computers and software as well as specialised scientific equipment with a move towards achieving the target of computer for every 5 undergraduate students and 1:1 for staff and postgraduate students.

### 3.4 Energy generation and research

As the hub of knowledge generation and transmission in the Country, It is important that the University meets its requirements as well as responding to national research and development needs. The country is currently under going serious challenges in the area of energy generation and development. Specific research efforts in the short and medium term target exploring solutions to University and national energy needs.

Makerere has already taken up the leading role through the

- the establishment of the Centre for Research in Energy and Energy Conservation (CREEC) in the Faculty of Technology.
- Organised a national conference on the energy crisis in Uganda on 1st April 2006

### 3.5 Practical Orientation of Students produced

We have piloted the offering of field attachments and internships of students from the various programs in the University. We want to move towards a mandatory requirement for students to be exposed to the world of work through these attachments at one point during the course of study.

### 3.6 Partnerships

The University will continue with the process of fostering national and international partnerships. Focus move towards areas and mechanisms of the possibility of

- offering joint programs,
- Joint supervision of students research not only at the international level but also among national universities
- Inter supervision of internships and field attachments at the post and undergraduate levels respectively.
- Development of the Makerere University Private Sector Forum aimed at linking the university and the private sector

### 3.7 Investment Policy and Resource Mobilisation

In accordance with the *Universities and Other Tertiary Institutions Act 2001 Part XI: Financial Provision for Public Universities* the University has formulated an Investment Policy. The policy is intended to enhance University revenue so as to: modernize existing facilities and introduce new ones; fund research activities; and improving the general service provision. The policy is designed to maximize rate of return. The major goal of this Investment Policy is to enable Makerere University to attain financial sustainability. The Investment Policy shall cover short-, medium – and long-term investments including:-

- Liquidity Related Investment
- Capital investments for academic and students residential buildings
- Service providing facilities
- Developing Commercial Units at Research Centres
- Cost cutting investments such water harvesting and harnessing solar energy

The University has moved towards establishing an Institutional resource mobilization unit that will diversify the university resource base and ensure sustainability of the initiatives developed under the Institutional Development Program.

### **3.8 Marketing and image building**

Several landmark achievements have taken place since the transformations in Makerere University were described as the “Quite Revolution “ We have seen advancements in the areas of research in HIV/AIDS, Food and Nutrition, Environment, Public- Private partnerships, regional networks , demand driven curriculum. However, there has been limited visibility of these and other undertakings by the University.

The University is now set to capitalize on the achievements made to increase its visibility on the national and international scene. Major form of development for marketing the University as an institution will be the increased thrust toward dissemination of research methodologies and finding. We will also move towards ensuring that the budding intellectual property rights policy is enforced.

#### ***Acknowledgement***

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We wish to acknowledge the contribution of our Development Partners, the Government of Uganda, the private sector and parents, Staff and students who have been with us all the way and enabled us to move this far.

#### ***(Footnotes)***

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<sup>1</sup> There are other reasons for the increase in numbers overall. Up to 1995, Makerere was a fully state funded university. Opening up the door for privately sponsored students has widened access channels for both males and females (3/4 of students are self-sponsored). Many more courses are now on offer since some of these courses can be self-supporting), new modes of service delivery such as distance education, evening classes, etc. have contributed to the soaring numbers too..

# FINANCIAL RESOURCE MANAGEMENT

By  
Mr. Sam Akorimo  
University Secretary

## 1.0 BACK GROUND

Makerere University as an Institution has been in existence for more than 80 years, having started as a technical institute in 1922, and later in 1935 it became a centre for Higher education in East Africa. In 1949 it became a University College affiliated to the University of London. In 1965 it became a university of East Africa and in 1970 it assumed the status of a national University of Uganda by an Act of Parliament. The walk through this period has not been without challenges. It has experienced ups and downs. Inspired by her vision *“To be a center of academic excellence providing world class teaching, research and services relevant to sustainable development needs of society,”*

Over the years, many things have taken place in the university that have affected every aspect of life.

- Increasing student numbers with an effort to keep the academic standards
- Renewal and revision of curricular
- New demand driven programmes both at undergraduate and postgraduate levels
- Quality assurance to meet the national development needs.
- Increasing on space and other infrastructure to match the increasing student numbers
- Introduction of e-learning and other non conventional approaches to transform the teaching process.

The university is going through a transformation in terms of increased student numbers and programmes driven by:

- (a) National Policies of Liberalisation
- (b) Privatisation and decentralisation
- (c) Government of Uganda Education White Paper, 1992
- (d) The Universities and Other Tertiary Institutions Act, 2001
- (e) Radical changes within Makerere University Budget and the emphasis of the National Education Sector Budget.

## 1.1 University Funding before 1992

The university government funding in the 1960s was adequate as what ever was necessary for its smooth running was received from government. Since the early days of the university, up to 1992, Makerere University relied fully on government funding in terms of tuition and living out expenses for all students. No funds were coming from anywhere else. It is important to note that at the time there was acute inadequate funding of the university as is indicated in the tables below. The percentage funding of the university recurrent government subvention budget, between 1988/89 and 2005/06 was between 27% and 56% (table 1) and that of the development budget was worse being between 2.3% and 10% (table 4).

### 1.1.1 Recurrent Budget

Table I

Year	Budget	Approved	% Funding
1988/89	2,719,454,955	1,516,702,126	56%
1989/90	6,948,568,037	2,426,369,000	35%
1990/91	10,656,533,898	3,570,694,000	34%
1991/92	11,617,935,055	6,285,819,000	54%
1992/93	15,987,908,901	6,285,819,000	39%
1993/94	31,881,210,000	8,641,950,000	27%
1994/95	32,938,968,033	12,766,673,000	39%
1995/96	33,849,073,330	20,328,433,000	60%
1996/97	37,410,222,334	20,579,406,000	55%
1997/98	47,487,101,551	22,541,938,000	47%
1998/99	44,331,343,760	26,075,383,000	59%
1999/00	51,326,220,785	25,040,024,000	49%
2000/01	61,155,585,572	23,228,973,000	38%
2001/02	70,728,530,956	27,742,851,000	39%
2002/03	73,529,739,120	28,819,000,000	39%
2003/04	78,000,000,000	26,289,000,000	34%
2004/05	103,000,000,000	26,590,262,000	26%
2005/06	127,065,491,821	38,472,427,000	30%

The table indicates that there was inadequate funding and that there was decreasing funding from government.

### 1.1.2 Table 2: Capital Development

Year	Gov't Allocation Shs.
1 1988/89	123,675,307
2 1989/90	554,179,000
3 1990/91	921,162,307
4 1991/92	344,049,000
5 1992/93	068,529,860
6 1993/94	1,800,000,000
7 1994/95	1,267,699,000
8 1995/96	1,202,019,000
9 1996/97	1,4000,000,000
10 1997/98	922,935,048
11 1998/99	6000,767,000
12 1999/00	625,000,000
13 2000/01	1,834,231,000
14 2001/02	1,828,973,075
15 2002/03	895,691,000
16 2003/04	301,262,050
17 2004/05	1,000,000,000
17 2005/06	830,000,000

### 1.1.3 The effects of Declining Public Funding

- The effects included:
- Declining staff Capacity
- Low research levels
- The academic programmes lacked inputs such as textbooks, science equipment, chemicals and field work for students was curtailed, for example shortening the period for teaching practice.
- The infrastructure of the university had deteriorated overtime and buildings were in a sorry state of despair.
- Staff animosity and strikes in the university were the order of the day.

### 1.1.4 New Developments in the University since the early 1990s

- In an effort to increase income, Makerere University started admitting fee paying students in addition to the Government sponsored students starting 1992.
- The student population has been expanding from 6352 in 1990/91 to 30,300 registered students in 2005/06.

- The number of students not funded by the government increased from 5% in 1992/93 to 77% in 2005/06.
- The University is transforming and changed the academic programmes to be demand driven. The term system has been discarded in favour of the semester system which is more accommodative to the paying students.
- New curricular have been developed and introduced and old ones have been made more marketable.

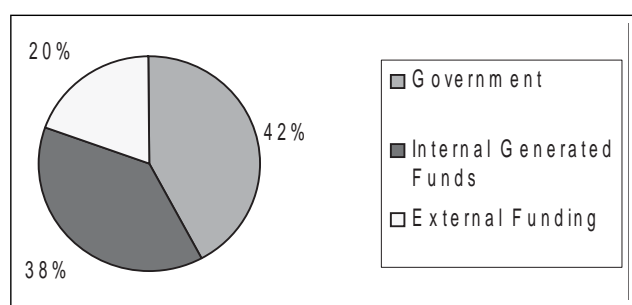
Due to these changes, the university had to learn and is learning new ways of management. One of the critical issues the university had to work on was the financial Management, given the growing student numbers among other changes.

## 2.0 MAJOR UNIVERSITY SOURCES OF FUNDING

### 2.1 Sources of Funds

Funds to the university come from the following sources (2004/05):

- Government Subvention - Shs.38.5 billion
- Internally generated funds (IGF) - Shs.34.7 billion
- External sources in terms of research and Projects - through Government of Uganda and external organisations – Shs.18 billion<sup>2.3</sup>



### 2.3 External Funding

Since in the early 1960s, the university has been receiving funding from a number of development partners around the world. The political process in the 1970s led to most of the development partners pulling out and started coming back in the late 1980s and 1990s. We take this opportunity to acknowledge the following for the support given to the University.



- Association of Commonwealth Universities
- Austrian Government
- Bill and Melinda Gates foundation for a two year grant to the Academic Alliance for AIDS Care & Prevention. The grant is to assist the University Research into & develop new preventive initiatives to reduce the risk of HIV transmission and improve access to antiretroviral therapies and the treatment of HIV related infections
- Carnegie Corporation of New York
- Centre for Disease Control(CDC) of the USA
- Chinese Government
- CIDA(Canada)
- Commonwealth Fund for Technical Cooperation for the three Professors in the School of Education
- DAAD
- DANIDA
- Earth University in Costa Rica
- Ford Foundation
- French Government
- Full bright
- Gatsby Foundation of the UK
- Hwang Sung Group of Companies
- IDRC
- Indian Government
- Inter University Council for East Africa
- Italian Government
- JICA
- KULIKA Charitable Trust
- MacArthur Foundation
- National Institute of Health, USA
- Netherlands Government
- Nigerian Government
- NORAD – for Institutional Development
- NUFFIC
- NUFU
- Rockefeller Foundation
- Sasakawa Africa Fund
- Sida/SAREC – Research & Staff Development
- UNESCO and many others.
- University in Tokyo
- Universities of Bergen, Trondheim, As, Oslo Delft, Florida
- USAID
- USHEPIA
- World Bank /IDA

## 2.2 Income and Expenditure Accountable to Parliament of Uganda 2004/05

Table 2:

	<b>Actual 30th June, 2005 Shs.000</b>	<b>Budget 30th June, 2005 Shs.000</b>	<b>Variance 30th June, 2003 Shs.000</b>	<b>Percent age</b>
<b>RECEIPTS</b>				
Grants from foreign government	3,834,056	10,534,851	0	
Transf. received from Treasury	36,653,143	36,653,143	0	
Non-Tax Revenues	34,684,935	40,161,570	5,476,635	
Miscellaneous	2,726,882	4,550,853	1,823,971	
<b>Total Operating Revenue</b>	<b>77,899,015</b>	<b>91,900,418</b>	<b>14,001,403</b>	<b>84.7%</b>
<b>EXPENDITURE – by nature of expenditure</b>				
Employee costs	49,987,485	50,580,694	593,209	
Goods & Services consumed	24,300,198	27,997,400	3,697,202	
Consump. of property, plant & equipment (Fixed Assets)	7,213,773	9,380,201	2,166,428	
Grant paid	121,437	215,593	94,156	
Social benefits	758,370	725,100		
Other expenses	4,570,888	4,641,408	(33,270)	
<b>Total Expenditure for Services Voted</b>	<b>86,952,151</b>	<b>93,540,396</b>	<b>6,588,245</b>	<b>93%</b>
<b>Surplus/(deficit) From Operating costs</b>	<b>(9,053,136)</b>	<b>(1,639,979)</b>	<b>7,413,157</b>	
<b>Net surplus/(deficit) before extra-ordinary items</b>	<b>(9,053,136)</b>	<b>(1,639,979)</b>	<b>7,413,157</b>	
Extra ordinary items				
<b>AMOUNT DUE TO THE CONSOLIDATED FUND</b>	<b>(9,053,136)</b>	<b>(1,639,979)</b>	<b>7,413,157</b>	

This table indicates that even when funds are allocated, and approved by the government, not all of it is released. In this particular case although 93million was approved, 86million was released and 6million was not released.

### 3.0 FUNDING APPROVAL

The Parliament of Uganda approves all government departments budgets including one for the University. The University budget is comprised of Recurrent, Capital, Appropriation in Aid (Internally Generated Funds) as well as Donor projects funding between the Government of Uganda and foreign organisations/governments.

#### 3.1 Government Funding (Recurrent excluding AIA)

##### 3.1.1 Recurrent

- At present the Ministry of Finance sets budgetary ceilings to all government departments including the University, contained in the call circular.
- The University is advised to fit all its financial requirements within the ceiling. The university must survive within the set ceilings irrespective of whatever budget proposal we have made and submitted to government. On the average, funding is about 49%.

**Table 4: Funding Government subvention**

1	Year	Proposed Budget	Approved	% Funding
2	2003/04	78,000,000,000	27,526,751,000	35%
3	2002/03	73,529,739,120	29,438,099,323	40%
4	2001/02	70,728,530,956	27,542,569,313	39%
5	2000/01	61,155,585,572	23,228,971,654	38%
6	1999/00	51,326,220,785	22,973,929,500	45%
7	1998/99	44,331,343,760	23,685,889,876	53%
8	1997/98	47,487,101,551	20,338,131,413	43%
9	1996/97	37,410,222,334	19,255,308,734	51%
10	1995/96	33,849,073,330	19,255,308,734	57%
11	1994/95	32,938,968,033	17,660,738,900	54%
12	1993/94	31,881,210,000	10,713,005,331	34%
13		<b>Average</b>		<b>48.9%</b>

As indicated by the low level of funding, the university is constantly in a financial crisis. Some of the funds

approved in the budgets/ estimates may not be released by the government.

### 3.1.2 Capital Development

**Table 4: Percentage allocation over budget**

Year	Proposed Budget	Gov't Allocation	%
	Millions	Millions	
1993/94	20.0	1.8	9%
1994/95	20.0	1.3	7%
1995/96	20.0	1.2	6%
1996/97	20.0	1.4	7%
1997/98	20.0	0.9	5%
1998/99	19.4	0.6	3%
1999/00	18.8	0.6	3%
2000/01	18.0	1.8	10%
2001/02	16.2	1.8	11%
2002/03	15.8	0.9	5.7%
2003/04	13.0	0.3	2.3%
2004/05	10.1	1.0	9.9%
2005/06	13.3	0.83	6.2%

#### To Note:

Not all that is allocated is released to the University. The biggest portion of this budget is to cover taxes as counterpart funding on Donor funded programmes.

### 3.2 Appropriation in Aid (AIA) Internally Generated Funds(IGF)

As indicated earlier, the fee paying students started in 1992 with small numbers and later numbers grew. Private programmes started within the Faculty of Law and later to other faculties. Likewise, financial contributions to the university by private programmes grew from about 20% in 1992 to 60% as of 2005.

Decisions regarding the university budget are taken by Council which determines the tuition fees and other student charges through the Senate. Budgets are also approved by Council.

This source of funding is known by the Government as Appropriation in aid and the Parliament of Uganda has to approve it.

#### 3.2.1 Tuition Fees Rates

The fees charged are normally below the cost of educating a university student. For example, while the average fees charged for 2002/03 was 1.5million, the calculated cost was 3.6million, this was compared to the average cost paid for the government student of 3.0million.

The fees being charged to the private students are as in table 5: below:

**Table 5: Fees Charged to Private Students**

No.	Unit	The Applied Existing Tuition Fees per yr Shs.	2002/03 Unit cost which was not Applied Shs.
1	Faculty of Forestry	1,200,000 -1,800,000	4,200,000
2	Faculty of Agriculture	1,800,000 -3,200,000	4,869,000
3	Faculty of Science	1,000,000 - 1,800,000	4,769,000
4	Faculty of Technology	1,650,000 - 2,550,000	4,551,000
5	Faculty of Vet. Medicine	1,920,000 - 3,200,000	6,742,000
6	Faculty of Medicine	1,920,000 - 3,200,000	9,212,000
7	Institute of Computer Science	1,800,000 - 2,700,000	4,477,000
8	Faculty of Arts	1,400,000 - 1,400,000	3,077,000
9	Faculty of Social Sciences	810,000 - 1,400,000	2,494,000
10	Faculty of Law	1,200,000 - 2,310,000	3,400,000
11	ISAE	1,000,000 - 1,500,000	3,078,000
12	Faculty of Economics& Mgmt	1,400,000 - 2,100,000	3,310,000
13	Institute of Psychology	1,200,000 -1,800,000	4,177,000
14	School of Education	810,000 – 1,440,000	2,977,000
15	IACE	700,000- 900,000	3,310,000
16	School of Fine Art	1,200,000-1,800,000	2,977,000
17	EASLIS	1,080,000- 1,200,000	1,096,000

- The average cost per government student under the funding for the year 2002/03 is 3,000,000 it includes welfare of students.
- The fees indicated in the table for government funding do not include accommodation and feeding.
- The fees being paid by the Private students are below the rate being paid for government sponsored students and below the realistic unit cost.
- The science based courses are more expensive than the humanities courses.
- The Ministry of Finance has not yet applied the unit cost in determining the budgetary ceiling for the University though efforts have been made by the University to press for it.

*Note: that the above unit cost is currently lower than the realistic unit cost because the production costs have gone up*

### 3.2.2 Internally Generated Funds (IGF) Trend

Year	Amount Received
2004/05	34,684,934,607
2003/04	29,269,728,000
2002/03	29,438,099,000
2001/02	19,030,439,000
2000/01	17,406,254,325
1999/00	15,080,261,764
1998/99	13,663,196,178
1997/98	8,799,261,213
1996/97	7,561,493,114
1995/96	4,080,059,201
1994/95	-
1993/94	-
1992/93	-

*To Note: The Appropriation In Aid (AIA), has been increasing over the years. The figure in 2002/03 was very high because of the collection of arrears, new programmes sponsored by Rockefeller/World Bank, Carnegie Women Scheme and SIDA/SAREC students at Makerere University.*

### 3.3 Funding From Development Partners

The level of external funding depends on the project proposals and the negotiations reached. In most cases these funds are for specific purposes, like research, construction, equipment and may not be used for the general running of the University.

In some cases some development partners agree on certain percentage as overhead and the overhead becomes the pool revenue of the University and in other cases they (development partners) specify the use of overhead they deem fit.

## 4.0 BUDGET ALLOCATION OF FUNDS TO FACULTIES/ UNITS

### 4.1 Funding by Government

The national budget is approved by the Parliament of Uganda but before this, the management of the University proposes allocations and presents these proposals to the Finance Committee which later are recommended to the University Council for approval.

The budget is managed centrally, this type of funding is called *Government subvention*. The allocation to items is usually based on past performance and other considerations.

#### GOVERNMENT SUBVENTION ALLOCATION 2005/06

**Table 6:**

RECURRENT BUDGET

New Code	Item	Amount
211101	Staff Salaries	33,100,232,956
211102	Contract Staff Salaries	
211103	Allowances	
212101	Social Security Contributions	
221001	Advertising & Public Relations	
221002	Workshops & Seminars	
221003	Staff Training	
221005	Hire of Vehicles	
221007	Books periodicals & Newspapers	372,194,040
221008	Computer Supplies & I.T Services	
221009	Welfare & Entertainment	
221010	Special Meals & Drinks	
221011	Printing, Stationery, Photocopy & Binding	
221012	Small Office Equipment	
221014	Bank Charges & other Related costs	
222001	Telecommunications	
222002	Rates	
223005	Electricity	
223006	Water	927,902,000
223007	Other Utilities: Gas, firewood, Charcoal	
224001	Medical & Veterinary Supplies	
224002	General Supply of Goods & Services	1,986,348,000
226001	Insurance	
226002	Licenses	
227001	Travel Inland	
227002	Travel Abroad	
227004	Fuel, Oils Lubricants	
228001	Maintenance Civil	
228002	Maintenance Vehicles	
228003	Maintenance Mach., Equip. & Furniture	
228004	Maintenance others	
263106	Other Current Grants	
273101	Medical Expenses	
273102	Incapacity, death benefit & Funeral Expenses	
282103	Scholarships & Related Costs	2,085,750,000
282104	Compensation to 3rd Parties	
<b>TOTAL</b>		<b>38,472,426,996</b>

Note: The number of staff in the university is, Teaching : 1027, None Teaching: 3087

The expenditure of subvention funds on the indicated items in the table above is not enough. Therefore such items will receive supplementary funds from Internally Generated Funds. Items that have no allocation at all from subvention will be covered by Internally Generated Funds although not fully. When money is released by the government, it is received and deposited on the University bank account. The central administration manages and monitors the spending and is responsible for the accountability.

#### **4.2 Approval of Budgets for Internally Generated Funds for Faculties/ Units.**

All Units prepare budgets which are presented to Finance Committee and later to the University Council for approval. The tuition fees and student charges are collected centrally on the Fees Collection accounts of the University.

Then the funds are later transferred to the Units or budget Centres according to the percentage distributions approved by Council. There is also revenue collected by the Units directly.

The Units to which distribution of revenue collected is made are indicated below.

- Faculty and or Department
- Wage Bill Top up
- Maintenance / Capital Development
- Retirement Benefit
- Staff Development
- Research
- Central activities
- Library
- Registrars Department
- ICT
- Hospital

#### **4.3 Budgets of External Funds**

The allocation of these funds is normally agreed with the development partners after considering the proposed budget lines. The budget lines differ depending on the nature of the project/research.

## **5.0 EXPENDITURE MANAGEMENT**

The approval of budgets is by council which grants authority to spend. There are budgetary controls in place in the university and these include:

- Monthly returns to the Ministry of Finance Planning and Economic Development and Ministry of Education and Sports.
- Quarterly reports to Council through Finance Committee
- Financial and technical reports to the partners in development.
- Commitment Control system

## **6.0 FINANCIAL REGULATIONS**

The University Council and the Ministry of Planning Finance and Economic Development have put in place regulations and guidelines that spell out how funds should be utilised and managed, these include:

- Treasury Financial Instructions and Regulations
- Public Finance and Accountability Act, 2003.
- Public Procurement and Disposal of Public Assets Act, 2003
- Makerere University Financial Instructions
- Specific Manuals for some Projects.

## **7.0 UNIVERSITY COUNCIL AND ITS ORGANS**

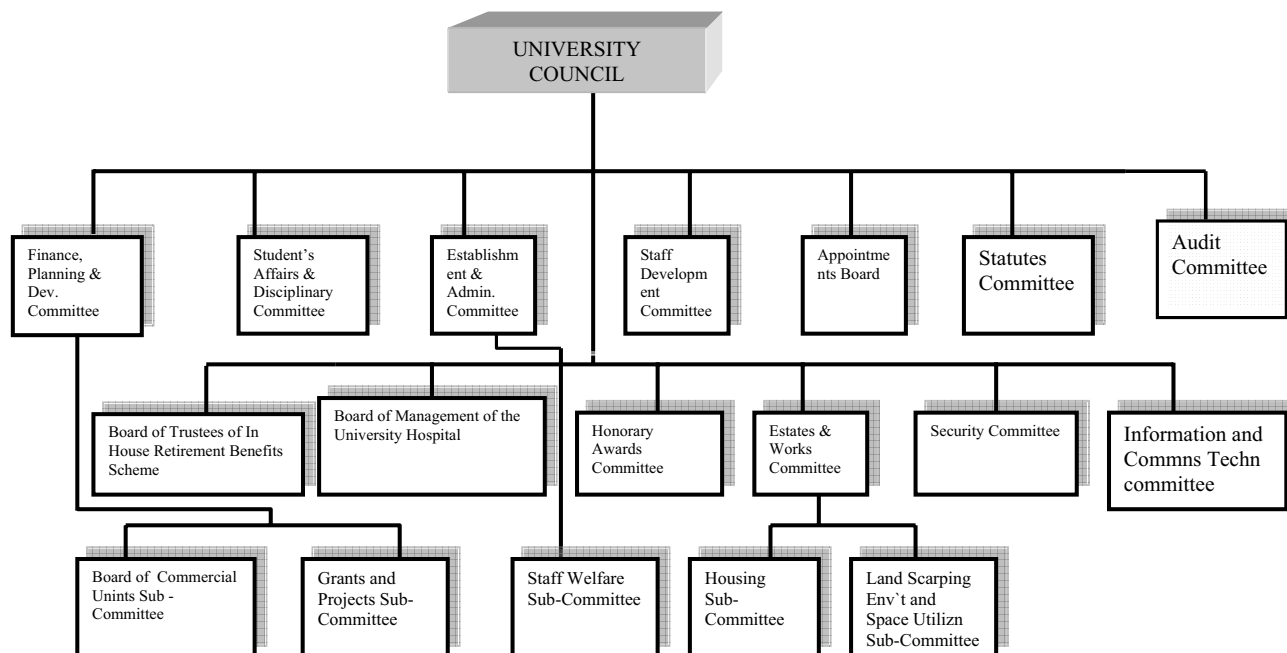
The University Council is the supreme governing body of the University. It is responsible for formulating University guidelines and policies. The University is managed through Committees and this has enhanced transparency and value for money. However this system has its own delays because of the beauraucracy but it is a more preferred system in the developing countries because it enhances transparency and accountability.

### **7.1 University Council Committees**

The University Council has more than ten Committees which are charged with different areas of management of the University. Among these Committees is the Finance and Planning Committee which oversees the finances.

Other Committees that ensure sound financial management are the Contracts Committee, Estates and Works, Planning and Faculty Finance Committees.

## 7.4 University Council Committees Structure



## 8.0 INFORMATION COMMUNICATIONS TECHNOLOGY IN THE MANAGEMENT OF FUNDS

The Financial system at Makerere University is still largely manual. However, some efforts are being made towards the automation of our operations. The University has enabled the Finance Department through NORAD among others, to acquire several stand alone computers and the Administrative System called Integrated Tertiary Software (**its**) which comprises of Academic Registrar Information System (ARIS), Human Resource Information System (HURIS) and Financial Information Management System (FINIS). The system was installed in February 2004 and as of now some of the functions of the university are on this Administrative Information System. The university still requires more money for the acquisition of more computers, continued training, installation of wireless internet, etc. for improvement of the utilisation of the administrative System. The University now manages the *Students' Accounts* on the system and other aspects of system implementation are following suit.

## 9.0 DECENTRALISATION OF FINANCES

During the time when funding of the University was fully by the government, finances used to be managed at the Centre. But through the University transformation process, when fee paying programmes were established, internally generated funds management has been decentralised to the Units.

The university accounting officer delegated his function to manage these funds to the Heads of these units as sub-accounting officers. These units have Finance Committees which ensure transparency and accountability of funds at that level. This includes Budgets, day to day expenditures etc.

## 10.0 COMPLIANCE AND CONTROL

Internal auditing and external auditing are some of the controls among others, put in place to ensure compliance. The Auditor General of Uganda has the responsibility over the external auditing of the University finances. Annual Audits are undertaken to ensure compliance with the national as well as the specified requirements in case of donor funds. The office of the Auditor General does this and sometimes he appoints other auditing firms to do it on his behalf.

I am happy to report that Makerere University has always been found to be one of the most compliant government institution. There have not been any adverse reports. All audit queries raised have always been answered to the satisfaction of the Auditor General and Public Accounts Committee.

## 11.0 MONITORING AND FINANCIAL REPORTING

As said earlier, there is decentralisation to the units in the management of funds, i.e. Internally Generated Funds, Donor Funds and Research Projects and the monitoring and reporting is handled by the various University Committees to which responsible officers in the central management report.

## 12.0 FEATURES THAT CONTRIBUTE TO A SOUND MAKERERE UNIVERSITY FINANCIAL MANAGEMENT SYSTEM

### 12.1 Areas of Emphasis

The University emphasizes the following:

- Proper stewardship of university finances)
- Good Treasury management to ensure:
  - Transparency of funds management
  - Value for money
  - Accurate recording of transactions with supporting documents
  - Timely presentation of financial reports
  - Being responsible for the end results and for action that bring about the end results.
  - Management of cash reserves
  - Proper formulae for allocation of resources
- Encouraging Income generation

### 12.2 Features of the University Financial System

In order to have a sound Financial Management System Makerere has made sure that the following exist and are followed.

#### 12.2.1 Accounting Controls

This involves the following:

- **The quality of Personnel** - The University has made sure that staff that possess personal and professional integrity are recruited.
- **Transaction authorisation and execution** - The policy is that a transaction must be authorised by a responsible person acting within the scope of his/her prescribed authority and responsibility.
- **Transaction recording** – In order to promote accuracy and reliable data, the transactions are recorded and classified promptly. This is because records and documents are physical evidence of the executed transaction and collectively represent the audit trail which is so critical to an auditor while

tracing the transaction through the accounting system.

- **Segregation of Duties**

No system of accounting controls can prevent collusion. The best alternative and indeed the fundamental characteristics of accounting control and fraud prevention are segregating functional responsibilities. This is in place at Makerere University.

- **Periodic Transaction Evaluation**

- The accuracy of transaction execution and recording process are assessed periodically by comparing recorded facts and actual facts.

#### 12.2.2 Financial Reports

The financial reports are the requirement in the management of finances at Makerere University. The objective is to satisfy the stewardship function. The disclosure of financial information is also aimed at protecting the stakeholders against inefficient financial management. Issues of equity are brought into play when some students are fully paid for by the state and others have to meet all their academic and welfare requirements.

#### 12.2.3 Financial Policies

The Council sets the financial policies to ensure that financial transactions are carried out so as to achieve probity, accuracy, economy, efficiency and effectiveness.

## 13.0 THE CHALLENGES

Major challenges facing the university in this respect are as follows:

### i) Inadequate Funding from the Government

The University only receives a grant for the State sponsored students. These students do not pay tuition fees as it happens in other countries. This grant covers only 40-49% of the cost of those students.

### ii) Realistic Unit Cost

The data on this is available but it has not been possible to apply it. Hence, even the private students pay less than realistic unit cost. The public may be assuming that the University is getting a lot of money because it is charging fees to such students as a principle but in actual fact, what is being charged is not a realistic unit cost. This creates a problem in the minds of the public. The university is trying to convince government to implement the unit cost through constructive engagement. The government has indicated that it might implement the unit cost through the students loan scheme.

### **iii) Faculties that cannot attract Private Students**

The science based Faculties are expensive and do not attract students who can pay for themselves. This is compounded by the low science base of students from lower levels of education. With inadequate funding from the Government, these Faculties face many financial constraints in their operations. The government is encouraging secondary schools to invest in science education and the university is encouraging the faculties to develop demand driven courses which are on the market.

### **iv) Space – Buildings**

The University subvention grant from the State no longer addresses the Capital development needs of the University. The government mainly addresses the tax needs. In addition, apart from Norwegian government support, other development partners hardly consider this. The Internally generated funds also partly addresses the infrastructure development, for example senate building, Social Sciences building, Library extension etc.

### **v) Financial Information Systems**

Though the university has acquired the Financial Information System, resources have not been found for the purchase of more computers, equipment, training, space, etc. so as to have a smooth operation of the FINIS, ARIS and HURIS. It had become very difficult to manage the University of this size on a manual system. The monitoring and financial reporting are a big challenge. The university through the Norwegian Government has acquired an Administrative system which is helping to address the question of manual system.

### **vi) Attraction and Retention of staff by the University**

There are new skills needed in the University but the University's remuneration system tend not to attract staff with special skills e.g. in the area of information technology. Staff attrition tends to increase with new qualification particularly with the new requirement for PhDs. As soon as one gets the qualification, he/she gets market elsewhere. The university is trying to improve the remuneration of staff and this, it is believed will help in the staff retention.

### **vii) The Cost of Maintaining the New Technology**

In the last four years the University has made some good progress in the area of new technology with the assistance of donor funding. But the challenge is the cost to maintain this technology. This is because there appears to be no strategy from the local funding agencies in the country to address it.

The university is trying to establish funding contribution from faculties and other sources to address the issue of technology maintainance.

## **14.0 The way Forward**

### **14.1 Makerere University Development office**

As we mentioned earlier, Makerere University is undergoing rapid expansion and complexity in terms of staffing, student enrolment and number of new units.

Over the years, the budgetary resources from the Government have been consistently declining in relative terms yet the realization of the University's mission hinges on the capacity of the University to marshal sufficient resources to execute her critical development programmes.

As one of the main goals of the University's Strategic Plan, the University has established a Resource Mobilization Unit within the Planning & Development Department with the help of the Carnegie Corporation. The specific objective of this unit is to enhance the resources mobilization capacity of the University with the aim of getting contribution to the university budget, to eventually achieve self sustainability. The activities of this unit will aim at, among others:

- i. Capacity of the University in fundraising and business planning built
- ii. Collaborative linkages with partner institutions
- iii. Resource mobilization capacity of the Planning & Development Department strengthened.

The Unit was established on 1<sup>st</sup> October,2005 with the appointment of a Deputy Director in charge of resource mobilization and two Development Officers – one for Prospect Research (already reported for duty, while the other one is for Alumni Relations (not yet appointed).

### **14.2 Makerere University Investment Policy**

The University Investment policy is formulated with the aim of enhancing university revenue, modernize facilities, fund research activities and improving the general service provision. The Investment Policy sets forward alternative areas for increasing university funding while at the same time providing the ..... That could be obtained from this diversified funding sources.



## 1. Scope:

This investment policy covers the following key areas

- Short term liquidity based investments e.g. Treasury bills
- Pension funds
- Donations /endowment
- Capital investment - Construction of Faculties
- Cost cutting investments where the University is a potential customer and provides a big market e.g. Paper
- Technical expertise of the University, human resource
- Service providing investments
- Commercialization of research centers

## 2. Purpose:

This Investment Policy provides guidelines within which the University's investment portfolio is to be effectively and ethically maintained, managed and enhanced. It specifically seeks to:

- Establish clear understanding of the University Investment goals and objectives
- Define and assign responsibilities for investing activities
- Offer guidance and define limitations regarding investment of university assets
- Manage university assets according to prudent standards and consistent with the laws of the government of Uganda
- Establish the relevant investment horizon for which the assets will be managed
- Establish a basis of evaluating results

### 14.3 Conclusion

It is true that never at any one time will funding to the university be enough. However the level it is at now is low enough to negatively affect the critical areas of the university. The university is trying to enhance its budget through various means including, internal funds generation, the development office which will handle many activities including alumni, the investment policy which will handle things like Build Operate and Transfer, etc. It is our belief that most of the university challenges will be dealt with through this enhanced budgeting and supplementary support the development partners and well wishers.

# Norwegian Support to the Institutional Development Programme

By

Dr. J.R.S. Kabogoza,  
Chair, Norway support IDP support Steering Committee

## EXECUTIVE SUMMARY

Prior to the expanded Norwegian support to Makerere University, the main weaknesses that were at the start of the institutional development programme were:

- Inadequate and poorly maintained infrastructure which made an overcrowded and sometimes unsatisfactory academic working and living environment. Available building space was about 178,000 m<sup>2</sup> in the year 2000 and there was urgent need to increase space by at least 50%.
- Outdated organizational structure: bureaucratic processes and some overstuffed administrative units causing inefficiency in the University. Student expansion had not been matched by improvements in administrative and coordination mechanisms.
- Inadequate finances: Despite the growing capacity for generating additional funds internally, the University remained under-funded coupled with a steady yearly decline in funding from government.
- Uneven generation of income: The humanities were better placed to generate income than the science/laboratory-based units due to limited available space and high cost of programmes.

Gender mainstreaming process in Makerere University started way back in 1998 but it was not given enough support then. The objective was and is still to integrate gender equality concerns into teaching and learning, research, governance and administration, outreach, student and staff welfare, data management and the organizational culture.

The Norwegian support to the IDP although broader in scope, has brought in important interventions to relate higher education to the needs of society by supporting the development of human resources in technical fields and increasing the practical orientation of the graduates. It also has facilitated innovations and quick response to the changing needs of society.

The 5-year support (NOK110m approx. US\$13m) aimed at improving the university's capacity in terms of expanded physical infrastructure for widened access given the increased demand for university education; development of competence of the human resource through further training and exposure to best practices;

contribution to ICT-enabled operations in administrative and Library service delivery; and enhanced capacity for gender mainstreaming, research coordination, publication, outreach activities, institutional collaboration and networking.

The support specifically benefited 16 units in the university namely:- Planning and Development Department (PDD), Administration (incl. development of the administrative computing information systems (ARIS, FINIS, HURIS and MakLIBIS coordinated by the Directorate of Information Communication Technology Support (DICTS), School of Graduate Studies (SGS), Department of the Academic Registrar (A/R), Department of Women and Gender Studies (DWGS), Faculty of Forestry and Nature Conservation (FNC) (incl. Budongo Forest), Nyabyeya Forestry College (NFC), Makerere University Agricultural Research Institute, Kabanyolo and the Continuing Agricultural Education Centre (MUARIK/CAEC) under Faculty of Agriculture, Department of Animal Science (DAS), Department of Food Science and Technology (DFST), School of Education, Institute of Computer Science (ICS)/now Faculty of Information and Communications Technology (FCIT), Department of Botany, Meteorology Unit/Dept. of Geography and Department of Zoology (for a NUFU-like research co-funded research project).

The support has enabled the University to realize achievements in a number of strategic areas that include:- revival of strategic planning in the entire university, expansion of utilizable space by an additional 8,405m<sup>2</sup> (for DWGS, ICS/FCIT and DFST), a Girls' Hostel at NFC and rehabilitation and modernization of laboratories restocked with specialized equipment at MUARIK; and refurbishment of CAEC as an outreach unit for the farmers.

As a joint effort, with other development partners, Norwegian support has improved the university's visibility with presence on the global internet, access to e-journals and enriched the modes of communication by e-mail, intranet and LANs.

Staff capacity and competence (with additional staff attaining 20 Ph.Ds and 20 Masters) in teaching, research, publication and participation in institutional collaboration and networking have been greatly boosted, thereby promoting the image of the university.

As spin-off gains from the enhanced capacity, access has been widened and new academic programs have been introduced in areas such as gender, ICT, meteorology, environment and energy conservation both as short-term certificate, diploma or degree courses.

Norwegian support to Makerere University has also been received through NUFU. The current third NUFU phase 4-5 years (2002 – 2007) programme worth NOK51.7m (US\$7.9m) supports a total of 53 Ph. D. students and 40 M.Sc. students out of whom 9 M.Sc and 2 Ph.D. have been completed with a number of research sub-projects that are society, health and environmental problem-solving oriented. NUFU support targeted strengthening capacity of Makerere University staff participation in institutional collaborative research and training in various specialized areas with Universities in the African region and Norway. Participating institutions from both Norway the African region south of the Sahara, southern Asia and central America. Preliminary discussions for the fourth phase to run from 2007 to 2011 are underway.

### **Gaps/or Continuing Areas of Need**

Although much has been achieved from the support received so far from the Norwegian support and other development partners, there are areas where Makerere University still needs more support.

- Infrastructure: need for more new buildings for lectures, laboratories and staff office accommodation.
- Human Resource development. With the requirement for academic staff at the lecturer level to have a PhD, a lot of support is still needed. The university is using some of the internally generated resources to support staff through its Staff development programme. Programmes like NUFU and Sida/SAREC and others have come in strongly to build the human resource capacity but much more is needed given the increased student numbers.

## **1.0. BACKGROUND**

Makerere University Strategic Plan: 2000/01 – 2006/07 has been operationalised through her Institutional Development Plan (IDP) which is updated annually. The University pursues a balanced development of its capacity and performance in order to respond to increasing demand for higher education and changing social, economic, political and technological environment.

However, due to shortages of resources and the University's critical reflection on the nation's priority needs, the university has laid emphasis on the following prioritized areas:

- Information and Communication Technology (ICT).
- Library Services.

- Research.
- Science Based Disciplines (Agriculture and Livestock Management, Health Sciences, Science and Technology and Environment and Nature Conservation).

Norwegian continued support towards the University's IDP therefore targeted the priorities spelt out in the strategic plan. The University strategic Plan and the IDP by design is aimed at addressing the relevant Government policies and priorities as spelt out in PEAP. The support was also guided by areas of interest in the Memorandum of Understanding (MoU) between Government of Uganda and Government of the Royal Kingdom of Norway. The overall goal was to improve the capacity of the University through the following objectives:-

- Expansion and renovation of her physical infrastructure to give wider access to University education.
- Development of competence of her human resource by way of training at various levels and exposure to best practices in quality training, research and service delivery.
- Strengthened application of ICT in administration, teaching, learning and research with modernized Library Services.
- Intensified research, publication and outreach activities by staff and strengthened collaboration and networking with sister institutions locally and abroad.
- Above all enhanced Gender mainstreaming in the University Curricula, governance and its operations besides strengthened role in promotion of Agriculture and Environmental Conservation.

## **2.0 PROGRAMME FUNDING AND IMPACT/OUTCOMES**

The expanded Norwegian support worked as a catalyst for other development partners' support to Makerere University in its effort to strengthen the desired capacity for quality teaching, research and service delivery.

### **2.1. Improved Infrastructure**

The support has expanded lecture and office space and significantly contributed to the general improvement of the University's physical infrastructure. Additional 8,405m<sup>2</sup> of space have been created now housing the Department of Women and Gender Studies (2000m<sup>2</sup>), the Faculty of Computing and Information Technology (2,375m<sup>2</sup>) and Department of Food Science and Technology (4,030m<sup>2</sup>).

It has also contributed to other physical infrastructure improvements including construction of a Girls' Hostel at Nyabyeya Forestry College, renovation of the University Herbarium and construction of a perimeter wall fence around the Botanic Garden on the Main Campus, rehabilitation and re-equipping/furnishing of a number of specialised training laboratories at Makerere University Agricultural Research Institute, Kabanyolo (MUARIK), refurbishing of the Continuing Agricultural Education Centre (CAEC) at MUARIK under the Faculty of Agriculture.



*Food Science Building*

## 2.2. Improved Staff Competence through Human Resource Development

With support through NORAD, NUFU and through her own initiatives, the University has greatly enhanced the competence of her human resource by way of training at various levels and exposure to best practices in quality training, research and service delivery.

### 2.2.1. NORAD Contribution to HRD

The uniqueness here is that the development covered both academic and non-academic members of staff in an effort to improve their performance. A total of 22 Ph.Ds and 29 M.Sc.s have been completed in the course of the past five years as summarized in Table 3 below.

**Table 1: Summary of Human Resource Development**

Award	Supported Unit																Total
	DAS		MUARIK		FNC		BOTANY		METEOR.		PDD		NFC		ZOO		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Ph.D.	1				6	4	1	3					1		3		19
M.Sc.	1		1		1	1	4	5			1		3		3		20
PGDip									4								4
Degree											1						1
Dip./Cert.			8								5						13
Others*																	
<b>Total</b>	<b>2</b>	<b>-</b>	<b>9</b>		<b>7</b>	<b>5</b>	<b>5</b>	<b>8</b>	<b>4</b>		<b>6</b>	<b>1</b>	<b>4</b>	<b>-</b>	<b>6</b>		<b>57</b>

\*: Many of the other staff's competences have been sharpened through attendance of Conferences, Workshops, best practice study visits and specialised skills training

### 2.2.2. NUFU Contribution to HRD at Makerere

NUFU support targeted strengthening capacity of Makerere University staff participation in institutional collaborative research and training in various specialized areas with Universities in the African region and Norway. Participating institutions include:-

#### Norway

Oslo School of Architecture,  
 Norwegian School of Veterinary Sciences  
 Norwegian University of Life Sciences  
 Norwegian University of Science & Technology  
 University of Bergen

## African Region

Addis Ababa University  
National University of Science & Technology  
University of Cape Town  
University of Nairobi  
University of Dar-es-laam  
Jomo Kenyatta University of Agriculture and Technology  
Makumira University College  
Tumaini University  
University of South Africa  
Luthern graduate School of Theology  
University of Zimbabwe  
University of Zambia  
University of Pretoria  
Eduardo Mondlane University  
National Veterinary Institute  
Tanzania Wildlife Research Institute  
Sokoine Agricultural University

The 4-5 years (2002 – 2007) programme worth NOK51.7m supports a total of nine main (Ph.D. and M.Sc.) research projects with a number of research sub-projects that are society, health and environmental problem-solving oriented.

### The key research projects include:-

1. Southern & Eastern Research Cooperation for Habitat (SEARCH).
2. Africanisation of Biblical Studies in three Eastern Africa Research Institutions.
3. Collaborative Research in Environmental Toxicology and Zoonotic Diseases: A South-North Veterinary Network.
4. The Use of Medicinal Plants in Primary Health Care in Uganda.
5. Ph.D. Research Cooperation between Faculty of Technology at Makerere and NTNU.
6. Research in Basic Sciences at Makerere University and Collaborating Universities to promote Technological Development.
7. Essential Nutrition and Child Health in Uganda: A Research Project to promote Innovative Community-based and Clinical Actions.
8. Biodiversity and Plant-Animal Interactions in Uganda.
9. Research and Training Network in Pathology.

By way of Progress, a total of 53 Ph.D.s and 40 M.Sc.s are expected from these projects. In brief the status of the programme is that nine Masters and 2 Ph.D. students have completed. Postdoctoral research activity continues in collaboration with students that yielded 91 publications of which half of the papers have been published in refereed journals. Preliminary discussions for the fourth phase to run from 2007 to 2011 are underway.

## 2.3. Organization and Management (including ICT Development)

Norwegian support has enabled the revival of strategic planning and promoted institutional reporting in the University. Efforts are underway to attempt where possible to harmonise the reporting of the University to all its stakeholders including development partners.

The University has also managed to intensify efforts to improve funding of quality University education through 'unit cost-based budgeting and funding' of the University. A new fees structure and functional fees were worked out based on unit cost. To spearhead the move for diversifying funding of the University, establishment of a resource mobilisation unit in PDD is underway that is expected to actualise the newly formulated University investment policy.

Norwegian support contributed to the implementation of Organisation Restructuring of the University. New micro organisation structures were developed especially for administrative units. Facilitated identification of core and non-core functional areas to be divested and staff reduction for cost-effectiveness and efficiency. A new HR Department has been set up to take forward the restructuring exercise and even streamline all the human resource management functions in the University.

Facilitation of the move to devolved college model of governance in the University. Through best practice study visits to Universities in the African region and U.S.A., statutes, principles and guidelines for college formation have been documented and approved by Senate and the University Council. What is now awaited is piloting of the college model beginning with the College of Health Sciences (CHS) subject to availability of funding.

As a joint effort with other development partners, the support contributed to the operationalisation of the University's ICT Policy & Master Plan. The setting up of the Campus-wide network - Maknet's greatly boosted the marketing and image of the University with presence and accessibility on the global Internet and e-journals. It also enhanced Computer literacy and enriched modes of communication (through e-mail/Intranet, LANs & web-pages) and it is gradually transforming the quality of service delivery through use of the administrative computing information systems (i.e. ARIS, FINIS, HURIS and MakLIBIS).

**Table 2: A Comparison of ICT Penetration in the University**

Indicator	Yr2000	Yr2005
ICT literate staff	300	3000
Networked computers	300	2700
LANs	15 (Poor)	40 (Good)
Backbone (Gigabit)	None	16Km
Bandwidth	128Kbps	15Mps
E-Mail Users	300	3000+
On-Line Journals	0	8000
Internal ICT Budget	USD25,000	USD700,000

## 2.4. Gender Mainstreaming

Enhanced Gender Mainstreaming in the University with strengthened capacity for training and research in gender (given the well stocked Library rich in gender materials), and facilitation in organization of the 2002 Women World Conference that contributed to the image of the University as far as promotion and sharing of experiences on gender issues are concerned.

## 2.5. Development Research capacity & Promotion of Applied Research

With Norwegian support, the University has improved Laboratories by way of rehabilitation and acquisition of specialised equipment at MUARIK for research and training. With the refurbished CAEC, now farmers from various parts of the Country and other Institutions are able to come and share their experiences with staff and students from the Faculty of Agriculture. For example is the on-going Animal Science research on Ankole Cow and Mubende Goat whose outcome is expected to improve the local breeds for the majority peasant farmers to improve their incomes and general welfare.

## 2.6. Linkages

Collaborative Linkages between supported Faculties & Higher Education Institutions in the region and internationally. Prominent among the linkages has been that of the Faculty of Forestry and Nature Conservation with AUN/NORAGRIC that besides research has involved joint M.Sc. training in Natural Resource Management and Sustainable Agriculture (MNRSA). This program has been running for the past 4-years with an average intake of 20 students from various countries for a period of 8-weeks per year. Initiatives are underway to further improve University-Private Sector partnership (e.g. DFST with the Food processing Industry and the Private Sector-University Forum).

## 2.7. Spin-Off Benefits

Norwegian support besides being a catalyst to other development partners, it boosted development of academic programs especially in the cross-cutting areas of ICT and Gender. The introduction of these new programs has gone a long way in widening access, enhanced Gender training/gender materials. Underway also is the introduction of new programs in the area of Meteorology training and research.

## 3.0. SYNERGIES WITH OTHER UNIVERSITY PROGRAMMES

- Co-funded NUFU like research done by staff from the Department of Zoology.
- Co-funded the ICT development initiatives with Sida/SAREC, AfDB, GoU and Mak.
- Supported Research capacity with NUFU, Sida/SAREC and Carnegie Corporation of New York coordinated by the SGS.
- Co-funding of Human Resource Development in line with the University policy that requires a minimum qualification of a Ph.D. for one to be appointed a Lecturer.
- Support that has enhanced the physical and technical capacity for Gender Mainstreaming in the University.
- Enhanced capacity of the University's outreach programmes for instance with the refurbishing of CAEC at MUARIK under the Faculty of Agriculture and School of Education. This is also linked to [I@Mak.com](mailto:I@Mak.com) program that aims at building capacity for decentralised service delivery. Effort is also being made for a feedback on how HRD needs at the Districts can impact on improvements to tailor some of the existing academic programs or even develop new ones.
- Enhanced forging of collaborative linkages between supported Faculties at Makerere University and Universities in the region and internationally.

## 4.0. EXPERIENCE AND LESSONS LEARNT

- Need to lobby, negotiate and strike a compromise on priority areas of support.
- Need for clear project conceptualization as a key factor in gauging achievement of intended objectives.
- Project implementation is both an activity and a learning process in itself that requires a combination of factors including a high degree of commitment and teamwork of all key players.

## 5.0. CHALLENGES

- Limited clarity at project conception at design and proposal development stage (e.g. for Administrative Computing component).
- Changes in Leadership at various levels from top management to the unit/departmental level.
- Change and sluggishness in the rather bureaucratic Procurement procedures.
- Inadequate and irregular sensitization of the Heads of supported Units on the new Procurement Law and Procedures coupled with frequent changes in coordinatorship of projects at unit level partly hampered the smoothness in implementation.
- Un-anticipated Cost over-runs due to under-estimation at project formulation stage hence the persistence of the need for fund re-allocations and alteration on expected outputs.
- Time over-runs hence the need for no-cost extensions for many of the components (e.g. in case of research on seasonal crops and animal breeding researches on long reproductive cycles where it can take between 5 to 8 years to complete the selection process of elite animals for genetic multiplication).
- Poor reporting in varying formats and level of detail especially with the not well coordinated support for research, outreach and consultancy services that are more individualised rather than institutionalised.
- High bank charges coupled with holding of programme funds on many accounts and erratic exchange rate fluctuations between the UGX and other currencies (US\$ and NOK).
- Need for one to be fully appointed in the service of the University before s/he can be trained.
- Budgetary constraints.
- High staff turnover due to poor term.
- Inadequate staff capacity and facilities vs. pressure to widen access to University education.
- Inadequate funding/or insufficient provision for

operation, maintenance and hence lack of sustainability measures for the existing and newly established infrastructural facilities.

- Full transformation of Makerere still remains a challenge with particular regard to: financing quality higher education, balancing teaching, research and outreach, infrastructure and ICT development, relating higher education to the needs of society, students and staff welfare, AIDS/HIV scourge, gender mainstreaming and equal access to higher education, reforming the governance and delivery of higher education and quality assurance.

## 6.0. PROGRAMME REVIEW MONITORING & EVALUATION

The key issues raised in most of these reviews in brief include:-

- Need for harmonisation of the reporting on development support from all stakeholders for better management and coordination.
- Improvement in programme design and management with clearly monitorable indicators.
- Big student numbers versus inadequate internal capacity in terms of facilities and qualified human resources required for quality service delivery.
- Need for priority setting or in other words curving out a strategic choice of 'nichee' for Makerere University in order to have an impact in the increasingly competitive area of higher education provision.
- Sustainability of funding of desired growth in demand for quality higher education, training, research and relevant service to the community.
- Lack of inbuilt capacity to maintain the infrastructures put up with development partner support

## 7.0. WAY FORWARD

In line with Government policy if backed up by provision of required resources, the University has adopted / or plans to adopt:-

- A reformed admission system:-
  - Where emphasis for Govt. Scholarship is focused on promotion of science with selective but gradual reduction by an average of 10% p.a. on intakes in humanities disciplines
  - Admission based on merit and quota system for national equity
  - Affirmative action on gender, the disadvantaged and sports.

- Sustainability measures that include:-
  - Lobbying for implementation of Unit cost-based funding of the University which is to be attained with a gradual review of the fees structure payable by all students.
  - Restructuring management of the University which includes plans to divest from non-core activities such as catering and accommodation of students.
  - To further deepen the semi-autonomy of Faculties, the University plans to begin piloting the college model of governance.
  - Diversification of funding sources using the newly formulated investment policy.
- Identification of niche‘ areas for Makerere that is to be tackled in the next planning cycle.
- Continued education and sensitization of Heads of Department and Deans on the procurement procedures
- Implementation of the Harmonized Reporting System to all its stakeholders
- Rejuvenated effort in recruitment procedures
- Enhanced training programs including In-House training
- Development of Quality Assurance Policy guidelines



# Sida/SAREC –MAKERERE UNIVERSITY BILATERAL COLLABORATIVE RESEARCH SUPPORT PROGRAMME

By  
Prof. E. Katunguka Rwakishaya  
Director, Graduate School

## Executive summary

The objectives of the Sida/SAREC support programmes to Makerere were to produce qualified lecturers engaged in building research groups thus instilling research culture in supported faculties, to increase the number of potential PhDs at the supported and other faculties through a university wide research fund, to enhance research within the whole university particularly through Information and Communication Technology (ICT) and library support and to enhance the capacity for research coordination and programme administration at the School of Graduate Studies. The support was extended to identified faculties/units namely, the School of Graduate Studies, Faculty of Agriculture, Faculty of Medicine, Faculty of Social Sciences, Faculty of Technology, the Directorate of Information and Communication Technology Services and Library. In order to meet these objectives, Sida extended to Makerere a sum of 95,370,041 SEK (Equivalent to USD 10,857,591) between 2000 and 2005. The programme support has strengthened the position of Makerere University as a leading provider of Science education and research and the university now has a potential to develop world class centres of excellence in regional development issues such as health, agriculture, technology and social sciences. It has contributed to the modernisation of Makerere through ICT and library services which have enhanced transparency and efficiency in university operations. It has also improved the quality of university lecturers and graduate students through support for PhD training and enhancing the capacity of staff to supervise, to conduct research and to publish.

So far the achievements have been considerable. But challenges remain in ensuring that Makerere University maintains her position as the leading research and training institution in the region. The University research community will have to respond to the new challenges brought about by the introduction of multi-party democracy. Research in other important development issues, including HIV/Aids, Energy, Water resources and Environmental Sustainability will have to be taken to a higher level. In pursuit of all this, Makerere University will need the continued support of all her stakeholders.

## 1.0 Introduction

The overall goal of the Sida research support to Uganda was to assist Uganda in its endeavour to promote research for attainment of new knowledge and Makerere University, as the only tertiary institution for local Ph.D training and research, was identified as the most appropriate focus for this support. This is a strategic contribution to the overall capacity for research in Uganda. The aim of the programme was to support an environment that is conducive for research and research training. The support to individual research projects in some faculties was a tool to achieve this goal and has the slogan ‘To support the supervisor to supervise’ through collaboration with other universities in Sweden or elsewhere. Organisation of research efforts around a theme provided the opportunity for information sharing between faculties/units as well as providing potential for cross disciplinary research. In order to enhance the impact of research carried out, a collaborative research theme of “Lake Victoria and other water resources”, was defined.

In summary, the overall capacity objectives were as follows

- To produce qualified lecturers motivated to do more research and engaged in building research groups around themselves thus instilling a research culture in the supported faculties
- To increase the number of potential Ph.Ds at the supported faculties and other faculties through a university wide research fund
- To enhance research within the whole university particularly through ICT and library support
- To enhance the capacity for research coordination and programme administration at the School of Graduate Studies

## 2.0 Level of funding

During the reporting period, Sida provided Uganda, through Makerere University, during the pilot phase from September 2000 to December 2001 with a total of SEK 15.0 million. In the three year period 2002-2004 which was extended to June 2005, the university received SEK 96.610 million plus an additional 7.5 million that was earmarked for the Faculty of Technology.

**Table 1: Level of funding (2000-2005)**

Year	SEK	USD
2000	5,027,500	488,684
2001	12,450,000	1,175,209
2002	37,628,839	3,959,891
2003	18,942,874	2,461,614
2004	11,787,794	1,531,469
2005	9,533,034	1,240,724
Total	95,370,041	10,857,591

## 2.1 Forms of support to faculties units.

Research support under the general theme of ‘ Lake Victoria and Other Water resources’ and under the slogan of “To support the supervisor to supervise” was extended to the faculties of Medicine, technology, Agriculture, Social Sciences and to the Directorate of Information and Communication Services, Library and the School of Graduate Studies. The support took the following format:

- Support to senior researchers to conduct cutting edge research
- Support for Ph.D students to undertake their studies (tuition and research costs)
- Support to supervisors to link with their counterparts in Sweden
- Support for conference attendance by students and supervisors
- Independent research fund at supported units and SGS
- Support to Demographic Surveillance Site in Mayuge and Iganga districts
- Support to GIS laboratory
- Support to the cross cutting biomedical laboratory
- ICT Infrastructure development
- Support to Library services
- Cross cutting courses

## 3.0 Supported Activities in Faculties/Units

### 3.1 School of Graduate Studies

The School is the coordinating office for research in the whole university as well as the research activities under Sida/SAREC programme.

The activities under the programme included

- a) Administration and Coordination of the programme. This included administration of the budget and research activities in the supported faculties/units
- b) Coordination of cross cutting courses.
- c) Coordination of the Demographic Surveillance Site (DSS)
- d) Coordination of the Geographical Information System Laboratory
- e) Coordination of the Biomedical Laboratory

### 3.2 Faculty of Agriculture

The faculty started with one study programme namely Urban and Peri-Urban Garbage Utilisation for Livestock Feeding. The programme later expanded to include the following:

- Urban Crop Waste Soil Fertility inputs in urban and peri-urban agriculture systems
- Socio-economic implications of market waste utilisation in urban and peri-urban agriculture
- Integrated pest management in marked cropping/livestock systems in urban and peri-urban areas of lake Victoria Crescent Region

### 3.3 Faculty of Medicine

The programme has six sub-programmes under the theme of Uganda’s health related to lake Victoria and other water resources. The sub-programmes were:

- Research in Molecular Biology of *Plasmodium Falciparum* strains from around Lake Victoria in Uganda
- The clinical Pharmacology of Chloroquine and Sulfadoxime/Pyrimethamine in treatment of Malaria in Uganda (3 projects)
- Degenerative Disease/Human Papilloma virus (5 projects)
- Reproductive health/HIV (5 projects)
- Mental Health Projects of depressive illnesses in the Lake Victoria Basin

### 3.4 Faculty of Social Sciences

The programme in the faculty of Social Sciences was operating under the broad theme of Consolidating Peace and Development in the lake Victoria region and its environments. It had the following sub-programmes:

- Conflict and post-conflict reconciliation and transformation
- Public Policy, Changing Gender Relations, Ideologies and Identities
- Political Economy of Disease in the Context of Conflict: A Study of the HIV/AIDS pandemic in the region

- Gender Vulnerability to HIV/AIDS and Changes in Risk Behaviour
- Agriculture Liberalisation, Gender Relations and Livestock Patterns in Central Uganda
- Uganda/s foreign policy in the Security Complexes in the Great Lakes Region from 1986

### 3.5 Faculty of Technology

The programme title was Sustainable Technological Development in the Lake Victoria Region (Uganda) and there were the following research areas:

- Performance of Highway Pavements in the Lake Victoria Region
- Development of Appropriate and Environmentally Friendly Architecture around the Lake Victoria Region
- Characterisation of High Temperature Ceramic Materials in Uganda Water Quality Management and Pollution Control in Uganda
- Sustainable Energy for Rural Development
- Solar PV as Part of a Dynamic rural electrification Strategy in Uganda.
- Regional collaboration programme with Tanzania and Mozambique

### 3.6 Information and Communication Technology (ICT) and Library

The programme's first step was to develop an ICT Policy and Master Plan providing a coordinated framework from the development of ICT skills, infrastructure and systems. The five components under the programme included the following:

- Makerere University Network largely responsible for installation of Local Area Networks (LANS)
- End User Training Project (EUTP) for training university staff
- E-mail and Internet Services (EMI) responsible for the campus wide network and provision of e-mail, Internet facilities and establishment of kiosks
- Makerere University Library Information System whose objective was to integrate ICT in all library functions and access to electronic information resources for students and staff.

## 4.0 ACHIEVEMENTS

### 4.1 School of Graduate Studies

The administration of the graduate school underwent several changes during the reporting period which affected the coordination of the support. However, this was rectified with the appointment of Professor E. Katunguka-Rwakishaya as Director (From April 2005) and Dr Dranzoa Christine as the Deputy. They replaced Professor Bakibinga (Dec 2003 –August 2004) and Professor Opuda-Asibo (September 2000 – November 2003). During this period, University Council approved a new structure for the school allowing for recruitment of extra staff especially Deputy Director in Charge of Research. Secondment and local recruitment of more staff to handle the workload improved the coordination of research resulting into timely releases of funds and reports hence facilitating planning and activities at supported units.

### 4.2 Demographic Surveillance Site (DSS)

The Demographic Surveillance Site site was identified in 2001 in Iganga/Mayuge districts. The project was well received by the district administration and Iganga district allocated two office rooms which were later renovated and are now in use. The available space was expanded by use of a container. The management team was put in place and by the end of August 2004, all necessary preparation for full operation were finalised and the site was officially inaugurated in 2005 by the Swedish Ambassador to Uganda.

The idea of a demographic surveillance site for conducting studies not only related to medical issues but to research involving agriculture, social sciences, and technology met with great enthusiasm. A number of visits to other DSS were made during the reporting period and attendance to the annual meetings of the International Network of field sites with Continuous Demographic Evaluation of Populations and their Health in Developing Countries (INDEPTH) including the meeting in Hanoi in 2004.

While the overall coordination remains with the SGS, the Institute of Public Health has been mandated to manage and operationalise the site. Among the important milestones achieved is the establishment of a solid DSS management structure, sustained support from the districts, development of operational work plans and recruitment of key staff. The project is now set to define the Demographic Surveillance Area (DSA) of a total of approximately 12,000 households made up of 50,000 people with an anticipated increase in numbers.

### 4.3 The Cross Cutting Biomedical Laboratory

Biomedical laboratory was set up in the department of Biochemistry in the Faculty of Medicine and to date 15 pieces of modern equipment have been purchased. The laboratory is fully functional and scientists from the faculties of medicine, agriculture, veterinary science and science use the lab routinely. It has played home to the Genes and genomes cross course which is held annually in collaboration with staff from Karolinska Institute.

### 4.4 The Geographical Information System (GIS) Laboratory

At Makerere, there are a number of GIS units that have been set up to meet their specific requirements and the units have been working independently of each other. In order to access the state of the Art GIS resources in a cost effective manner, it was found necessary to support setting up a modern GIS laboratory in the Faculty of Technology. This has been done and technicians trained to run it. It is now fully functional

### 4.5 CROSS CUTTING COURSES

A number of cross cutting courses for Ph.D students were developed during the course of the reporting period and conducted as shown in the table below. It is evident that they were well received and the university is yet to develop the curricula fully and present them to the Board of Graduate Studies and Senate for approval and award of credit points.

**Table 2: Cross Cutting Courses Delivered During the Period 2002-2005**

Course	Collaborating Institution	Dates	No. of Participants
Philosophy of Research	Linkoping University	August/Sept 2001 September 2002 Aug/Sept 2003	20 28 14
Advanced Gender Qualitative and Quantitative Methods	Goteborg University Lund University	July 2003 June 2005	22 17
Genes and Genome	Karolinska Institute	Nov/Dec 2002 Dec 2003 Jan 2005	20 20 18
Qualitative and Quantitative Research Methodology		Nov/Dec 2001 Nov/Dec 2002	30 24
Statistics and Computer Applications in Research		May 2002 May 2004	20 20
		<b>TOTAL</b>	<b>263</b>

### 4.6 Information and Communication Technology (ICT)

Makerere made ICT a strategic priority as the most cost-effective means of increasing efficiency and effectiveness of teaching, research and research linkages. An initial step in the process was to come up with an ICT policy and an ICT master plan. The plan provided a coordinated framework for the development of ICT skills, infrastructure and systems and various development partners and the Government of Uganda funded different facets of the plan. Sida contributed to specific parts of the plan namely:

- Skills training for end users
- Library information systems (including access to journals)
- Data Network Backbone
- University E-mail, internet/intranet services
- Computers and local area network (LAN)
- Setting up ICT Support unit
- DICTS Staff training
- Establishment of student internet kiosks

### 4.7 MakNet subproject

To date the optical fibre backbone has been extended to cover four campuses of the university namely, the Main Campus, Faculty of Medicine, Makerere University Agricultural Research Institute, Kabanyoro and Makerere University Business School through procurement of servers and active devices.

A total of 132 computers and LANS for student computer laboratories in Sida supported faculties have been put in place.

#### 4.62 E-mail and Internet (EMI) Sub-component

Server capacity for various network services has been boosted through purchase of servers and related hardware. The university in association with 11 other African universities under the partnership of higher education is negotiating for access to a wider band width at affordable cost.

Twelve student kiosks with a total of 165 computers have been set up at various points in the university and over 90% of the university units have web presence compared to 5% in 2000. A total of 7000 e-mail users are now registered on the local mail system compared to less than 50 in 2000.

#### 4.7 LIBRARY

A total of 171 data points were installed at the main library and 28 points at Albert Cook library (Medical School). Sixty sun ray terminals were procured for accessing Online Public Access Catalogue, and integrated application system (Virtual ILS ) was procured and installed. This means that every member of staff of the university can access the catalogue to know which books are available and where they are. With the circulation equipment, which will be installed soon, members will be able to access the catalogue and borrow books on line.

The improvement in e-resources has been another achievement. There are now more than 11,000 journal titles on line. This means that students and staff can access the most recent literature and can get a print out of the abstract and a full paper on order using the prepaid document delivery system.

In collaboration with DATAD project, the library is compiling abstracts of all masters and Ph.D research outputs and this will be available on line. This will make

information available for research students and senior researchers and will go along way into eradication of duplication of research outputs.

#### 4.8 Enhancement of Research Capacity at Makerere

Through Sida funding at faculty level and provision of university wide research fund, a number of research projects were started and are ongoing and many Ph.D students were registered. A few of them have completed and many are still on the programme. Collaboration with Swedish institutions has been enhanced and many researchers and students at Makerere have been able to attend conferences and present their findings. The table below shows the number of projects initiated, researchers at Makerere involved and number of Ph.D students in Sida funded faculties/units.

**Table 3. Research Projects and Publications during the reporting period**

Out of the registered Ph.D students, one from Technology and One from Medicine have finished their studies. One from Agriculture is awaiting defence of her thesis and most of the students are expected to complete during 2006. In addition to supported individual research projects in the supported units, Sida provided for a competitive research fund. This fund allows those who are not being directly funded to do research and to participate in local and international conferences. The faculty of Technology through increased funding did not receive this fund.

Faculty/Unit	No. of Ph.D Student Projects	No. of other Research Projects	No. of Papers at International Conferences	No. of Publications in Referred Journals	No. of conferences/ Workshops Organised
Technology	12	15	15	6	3
Agriculture	4	31	13	13	3
Social Sciences	3	15	17	11	2
Medicine	19	43	24	24	6
DICTS/LIBRARY	4	8	13	13	1
Graduate Studies	27	-	-	-	-
<b>TOTAL</b>	<b>69</b>	<b>112</b>	<b>82</b>	<b>67</b>	<b>15</b>

The above table demonstrates the major contribution of Sida to the research activity of the university and to development of capacity through Ph.D training. It can be said that the research culture of the university is changing for the better though more needs to be done.

Eleven vehicles have been procured to facilitate transport especially as most research is field based. This has enabled scientist to move easily and follow up their research activities in far places.

Various equipment has been purchased and this has contributed to improved infrastructure for research as shown below.

## 4.9 Major Pieces of Equipment Purchased by Supported Units

### Academic unit Major equipment Agriculture

Project vehicle, laptop computers, and fibre tech for researchers and students

### Social Sciences

Lap top computers for each researcher and student, 3 heavy duty printers

### Technology

Bitumous universal testing machine, Water table Measurement System, Total Organic Carbon Analyser, High Temperature furnace, Chemical Reactions Teaching Equipment, Gasifier and accessories, Gas Chromatograph and Sampling Train, 1 project Vehicle, A laptop for each researcher and student

### Medicine

High Pressure Liquid Chromatography Equipment and Accessories, Project Vehicle

### DICTS

Servers and Active Devices, Network Equipment, MakLIBIS Back up system, database servers for the library, 132 computers and LANS in faculties, 12 Student Kiosks with 165 computers, Project vehicle.

### LIBRARY

LAN of 199 data points, 60 Sun Ray Terminals for Accessing Online Public Access Catalogues, New Power Mains, An Integrated Application System (Virtual-ILS)

### SGS

### DDS

Generator, 1 Vehicle, 5 motorcycles, Hand held computers and accessories

### LAB

UN/VIS Spectrophotometer, Gel documentation equipment, Gel densitometry, Fluorescent microscope, Centrifuge and ultracentrifuge and accessories, Generator, ELISA machine, PCR machine.

## 5.0 General Impact on the University Systems

Sida funding has led to major improvements in the operations of the university operations through:

- Improved Communication and transparency by daily use of the internet/ intranet and various Management Information Systems (FINIS, HURIS, ARIS, MAKLIBIS)
- Improved research environment through support for Ph.D training, research collaboration, facilitation for conference participation, library and ICT facilities, and Laboratory equipment in Science faculties
- Facilitation for field work through provision of transport facilities

However, these achievements have not been without challenges or constraints which need to be addressed for the programme to perform better. Some of these include:

- Slow Procurement Processes
- Students lagging behind schedule
- Need to overcome huddles experienced in collaboration between Swedish and Uganda supervisors
- Lack of forward planning by students and researchers
- Need to institutionalise Sida support and to understand the concept of bilateral support

In General terms, Sida/SAREC support to Makerere Institutional Development Plan (IDP) has strengthened the position of Makerere university as a leading provider of Science education and research, and the University now has the potential to develop centres of excellence in regional development issues such as, health, agriculture, engineering and technology and Social sciences. Sida has contributed to the modernisation of Makerere through ICT and library services which have enhanced transparency and efficiency in university operations. It has also improved the quality of university lecturers and graduates through support for Ph.D training and enhancing the capacity of staff to supervise, to conduct research and to publish.

## 6.0 SPIN OFFS

The programme has had a major influence on policy development outside the university, for example on issues of garbage management by Kampala City Council resulting from research outputs from the Faculty of Agriculture. Results from the Faculty of Technology have had influence on Uganda Energy Policy.

These activities involve the community and as such more visibility of Makerere university outreach programmes. The research outputs have attracted the private sector and other donors to come in and support other areas for example GTZ has committed to support the energy conservation project by carrying out an energy audit for Faculty of Technology. Sida/SAREC support has therefore created a basis for other donors to come aboard and build on the achievements.

## **7.0 WAY FORWARD**

Sida has renewed its support to Makerere University Institutional Development Programme for the period July 2005 to June 2009 and has committed 181,000,000 SEK for which the University is most grateful. In the next period, the coordinating office will continue to be strengthened by recruiting a Deputy Director in Charge of Research and utilising temporary staff to handle the workload. The university will need to address the identified challenges and constraints especially the procurement process, taxes on goods and services procured with Sida funds, forward planning by students and the completion rates of Ph.D students. There is still need to train more academic staff to Ph.D levels and to build the capacity of the university to vet research proposals hence build a way for competitive research grants/schemes.

Challenges remain in ensuring that Makerere University maintains her position as the leading research and training institution in the region. The University research community will have to respond to the new challenges to governance and human rights, brought about by the introduction of multi-party democracy in the region. Research in other important development issues, including HIV/Aids, Energy, Water resources and Environmental Sustainability will have to be taken to a higher level. The effective dissemination of research results to the communities that need them will be a major priority. The research culture that has been created will have to be consolidated and taken to a higher level through the entrenchment of research networks regionally and internationally in order to transform Makerere into a truly research led institution. In pursuit of all this, Makerere University will need the continued support of all her stakeholders.

## ***ACKNOWLEDGEMENTS***

*The University wishes to acknowledge the great contribution by Sida SAREC, the Government and People of Sweden to the Institutional Development Programme of Makerere. Special thanks go the Government of Uganda for creating an environment conducive for such bilateral support. The enabling environment created by the University Council, Senate and all Academic units is highly appreciated. The invaluable contribution by the Coordinating Office, School of Graduate Studies, is recognised.*

# Carnegie Support to Institutional Development Program

By

Dr. Maria G Nassuna-Musoke

Coordinator, Makerere Carnegie Institutional Development Programme

## 1. EXECUTIVE SUMMARY

Makerere in its Institutional development program works with development partners and stakeholders to address the 6 priority areas defined in its Strategic Plan of 2000/01 to 2006/07. Carnegie Corporation started supporting Makerere when Makerere was transforming from an institution of Higher Education into a University College together with the Rockefeller Foundation. Carnegie resumed support activities in Uganda in 2000 when Makerere launched its plan towards a new Strategic Plan in a, "Partnership for strengthening Higher Education in African Universities" with five other donors.

Carnegie offers Institutional support in what University prioritises towards its Institutional development plan and also supports the Female Scholarship Initiative (FSI), to promote girls from financially disadvantaged backgrounds to acquire University Education especially in Science and Technology. The Corporation is committed to work with Makerere for 10 years in 3 phases of 3 years each, from 2001 to 2010. The activities supported in an integrated and interlinked way, contribute directly to the overall Institutional capacity building and Development program.

Equity and access: Carnegie has supported the Gender mainstreaming programme and the Female Scholarship Initiative (FSI), Scholarships for Women diploma holders in Agriculture. Through the Distance Science Education project many Ugandans who would otherwise have been unable, to access University education. These affirmative activities have greatly enhanced the University's contribution to Gender and equitable access to services and development in the Country.

Relevance of Science teaching and research at the Makerere: Carnegie has supported Government effort to enhance science and technology through teaching and research through support of Development of capacity in quantity and valuation surveying project in the faculty of technology, Enhancement of student practical training in the faculty of Veterinary Medicine, and Building Faculty of medicine Social responsiveness to slum communities around the Medical school through community research and training. Development of new courses in Technology and Veterinary Medicine demonstrate Makerere's response to developing curricula that are in response to market demands.

### Information and Communication Technology (ICT):

The Corporation has supported Scientific Information Resource Development and Automation of the University Library, E-learning in the Directorate of Information and Communications Technology Services (DICTS) as well as Building capacity for technological instruction and establishment of new ICT linkages in the Women and Gender Department.

### Human Resource development:

Through the support of the Enhancement of Research at the School of graduate studies, the number of academic staff with PhD (minimum qualification to becoming a lecturer) has been increased by 30. The enhancement of student practical training in the Faculty of Veterinary Medicine, Makerere University has supported technical staff who are diploma holders to upgrade to degree level.

### Resource mobilisation and sustainability:

The Corporation in conjunction with the Norwegian Government supports the Planning and Development Department's (PDD) organizational and technical capacity to step up Institutional resource mobilisation through establishment of the unit and capacity building of the office bearers in Institutional Strategic Business Planning, resource mobilisation and fundraising and monitoring.

### Capacity, quality and relevance of the University's services:

Through the Tracer study project of the PDD, Carnegie Corporation has supported tracer studies of graduates from Science based faculties to help it identify factors that are key to the production of relevant graduates to the community. The findings of the study will also be useful for the planning and will also be fed into Quality Assurance project so that piloting Quality assurance at Makerere will be more informed.

The Corporation has so far extended financial support to Makerere University to the tune of US\$ 3,081,000 and US\$ 1,000,000 for the FSI during the first phase (2001 to 04). In the second and current phase (2004 to 2007), Carnegie is extending US\$ 2, 999,895 towards capacity building projects and an additional US\$ 1,000,000 towards FSI.



In the implementation of these activities the University has faced challenges such as inadequate funding by Government, inadequate staff capacity due high staff turnover including project leadership. The dynamics of adaptation to new National procurement regulations, owing to the transitions in Public Assets Procurement Act, and transition from the Old Makerere Act to the New Universities and Other Tertiary Institutions Act 2001 has had negative impact. Local vendors delay in delivery of goods and services.

The national low capacity for science teaching at secondary school level has slowed the pace of the affirmative action to involve more women in University science education. Limited infrastructure for graduates studies combined with limited funding for research related activities are hindering progress in that area.

In order to realise further steps the University intends to continue fundraising from other donors to broaden resource base, establish a Quality assurance unit to oversee all quality related activities in the University, orient project implementers in procurement procedures, continue engaging in more affirmative actions to encourage women to higher education especially sciences continue capacity development through strengthened research capacity and graduate training and strengthen the human resource development through support of more technical staff in science disciplines to upgrade to degree level in Bachelor of laboratory Science.

## 1. BACKGROUND

The Makerere Institutional Development programme is an effort by Makerere to tackle the 6 priority areas defined in its Strategic Plan of 2000/01 to 2006/07 i.e.

- Information & Communications Technology
- Library Services
- Research
- Science Based Disciplines
- Good Governance & Human rights
- Gender mainstreaming

Makerere has been able to tackle these six areas by working in close partnership with Development partners and other stakeholders. Carnegie Corporation Developmental activities in Uganda started as far back as 1946 when together with the Rockefeller Foundation, Carnegie supported the transformation process of Makerere from an institution of Higher Education offering Post School Certificate Courses into a University College

affiliated with the University of London. Carnegie did not continue its activities in Uganda after that until 2000 when Makerere launched its plan towards a new Strategic Plan. In its development activities, Carnegie supports Makerere in a “Partnership for strengthening Higher Education in African Universities’ with six other donors namely Ford Foundation, McArthur, Lloyd, Carnegie, Rockefeller and Mellon.

Carnegie offers Institutional support in what the University considers a priority to its proper functioning i.e. the University itself prioritises activities that it requests the Corporation for financial support. In addition, Carnegie specifically supports the Female Scholarship Initiative (FSI), a programme that promotes girls from financially disadvantaged backgrounds to acquire University Education especially in Science and Technology.

The Corporation is committed to work with Makerere for 10 years in 3 phases of 3 years each, from 2001 to 2010. The activities supported in an integrated and interlinked way, contribute directly to the overall Institutional capacity building and Development program as summarised below.

### 1.1 Equity and access

Under this Carnegie has supported the Gender mainstreaming programme and the Female Scholarship Initiative (FSI), Scholarships for Women diploma holders in Agriculture.

The Distance Science Education project has enhanced many Ugandans who would otherwise have been unable, to access University education through alternative education modes of delivery. The Project has also promoted Science in conformity with Government’s effort to promote development through Science education. These affirmative activities have greatly enhanced the University’s contribution to Gender and equitable access to services in the Country.

### 1.2 Relevance of Science teaching and research at the Makerere

The Cooperation has supported three activities that have greatly contributed to the enhancement as well as relevance of Science teaching, learning and research.

This is in conformity with the Government effort to enhance science and technology through teaching and research. The activities included Development of capacity in quantity and valuation surveying project in the faculty of technology, Enhancement of student practical training in the faculty of Veterinary Medicine, and Building Faculty of medicine Social responsiveness to slum communities around the Medical school through community research and training.

### **1.3 Information and Communication Technology (ICT)**

The corporation has supported Scientific Information Resource Development and Automation of the University Library. Students and staff have quick access to the latest International literature and information via the internet. The Corporation also supports E-learning in the Directorate of Information and Communications Technology Services (DICTS) as well as Building capacity for technological instruction and establishment of new ICT linkages in the Women and Gender Department. ICT is one of the six priority areas for the university towards its strategic institutional development plan. The university has now got an established Research management and Coordination system (RMaCS) to record research activities and outputs and avail them to the public. The activities together not only contribute to the University's capacity, to offer quality and relevant services to stakeholders, but also improve its capacity to adopt international technological breakthroughs'.

### **1.4 Human Resource development**

Through the support of the Enhancement of Research at the School of graduate studies, the number of academic staff with PhD (minimum qualification to becoming a lecturer) has been increased by 30. Through their PhD training, the staff have also undertaken research in both sciences and humanities.

Through the Enhancement of student practical training in the Faculty of Veterinary Medicine, Makerere University Technical staff who are diploma holders have been supported to upgrade their diplomas to the Bachelor of Biomedical and Laboratory degree. The activities of giving improved and advanced skills to technical staff has a multiplier effect since they directly pass the skills to the many undergraduate and graduate students whom they work with. This also contributes to Makerere's effort to supply the market demands with quality graduates.

### **1.5 Resource mobilisation and sustainability**

The corporation in conjunction with the Norwegian Government supports the Planning and Development Department's (PDD) organizational and technical capacity to step up Institutional resource mobilisation through establishment of the unit and capacity building of the office bearers in Institutional Strategic Business Planning, resource mobilisation and fundraising and monitoring. The university's ability to mobilise resources and allocating them according to strategic priorities is envisaged in the long term to help the University enjoy improved funding from diversified sources for sustainable development.

### **1.6 Capacity, quality and relevance of the University's services**

Through the Tracer study project of the PDD, Carnegie Corporation has supported tracer studies of graduates from Science based faculties to help it identify factors that are key to the production of relevant graduates to the community. The findings of the study will also be useful for the planning and will also be fed into Quality Assurance project so that piloting Quality assurance at Makerere will be more informed.

### **1.7 Carnegie Financial Support; 2001 to 2007**

The Corporation has so far extended financial support to Makerere University towards institutional capacity development in 2 phases. In the first phase (2001 to 04) a grant of US\$ 3,081,000 was extended towards capacity building. An additional US\$ 1,000,000 was extended towards the implementation of the FSI.

In the second and current phase (2004 to 2007), Carnegie is extending US\$ 2, 999,895 towards capacity building projects and an additional US\$ 1,000,000 towards implementation of FSI. The corporation is committed to a third phase (2007-2010) subject to the satisfactory completion of the first two phases.

## 2.0 ACHIEVEMENTS OF CARNEGIE SUPPORT AT MAKERERE

The Corporation has so far extended financial support to Makerere University towards institutional capacity development in 2 phases. In the first phase (2001 to 04) a grant of US\$ 3,081,000 was extended towards capacity building. An additional US\$ 1,000,000 was extended towards the implementation of the FSI.

In the second and current phase (2004 to 2007), Carnegie is extending US\$ 2, 999,895 towards capacity building projects and an additional US\$ 1,000,000 towards implementation of FSI. The corporation is committed to a third phase (2007-2010) subject to the satisfactory completion of the first two phases. Figure 1 shows the activities that the Corporation supports to 13 projects and the interlinked and complementary manner in which they contribute to the overall strategic institutional development program.

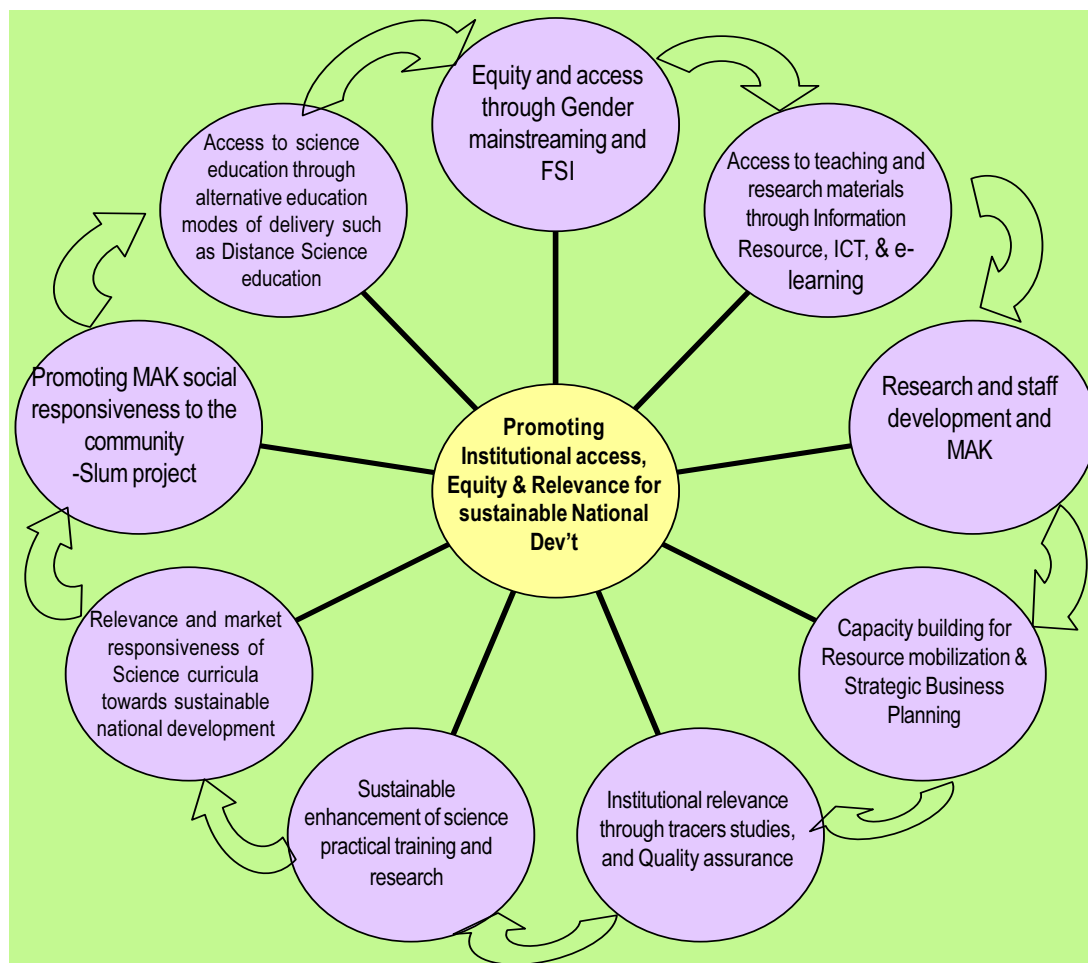


Figure 1: Carnegie contribution to MAK Institutional Development Programme

## 2.1 Gender Mainstreaming and Female scholarship Initiative (FSI); Establishment, Strengthening and Consolidation

### 2.1.1. Gender Mainstreaming and FSI

The Gender mainstreaming programme also implements the FSI. The Gender Mainstreaming Program has now been institutionalised. More students & staff are aware of gender issues and the Programme is visible and operational in various units of the University. Quarterly Newsletters and Promotional Materials available and have helped publicise gender and related issues in Makerere nationwide.

### **2.1.2 Major outcome of the FSI**

Since its inception, FSI has supported 504 beneficiaries, (288 Science and 254 Arts). Of these beneficiaries, 128 have graduated (65 Science and 63 Arts). There is now an institutional framework to manage the scheme; which has also contributed to the increased number of females enrolling at the University from 40.2% in 2001 to 45.8% in 2004. The scheme has promoted girl-child education and changed the lives of many needy girls to access higher education. Through the 'FSI After Admission Support Programme', Makerere has had an opportunity to know more about students' welfare and to address welfare issues accordingly.

The management of FSI has given Makerere an opportunity to network with Government Ministries, NGOs and CBO's. This combined with the success has led to a wide publicity of the program beyond East Africa. Other accomplishments include outreach to secondary schools.

### **2.1.3 Enhancement for Gender mainstreaming & Scholarships for Women with Diplomas in FA**

The support of this project enabled 25 women with diplomas to access University degree education in Agriculture. 15 of the 25 were progressing normally by the end of phase I in Sept 2004.

## **2.2 Access and Enhancement of Teaching Learning and Research through Library Resources, ICT, & E-Learning**

### **2.2.1 Scientific Information Resource Development and Strengthening Automation of Makerere University Library for Enhanced Teaching, Learning and Research**

Library services were improved through Electronic Document Delivery System (EDDS). The number of books increased to 2,233 titles in Science & Gender. The acquiring of 200 000 continuous catalogue cards, 1 000 catalogue protectors, 10 electronic pencils, 3 card sorters, and CD-ROM databases. Two Book check systems curbed theft of books

In strengthening automation through procurement of ICT equipment (29 computers, 38 UPS) teaching, learning & research were enhanced.

There was ICT-based Capacity building for Library staff & users. To enhance this further 23 librarians were recruited to do retrospective record conversion. They entered 142,306 records into the Virtua, making them available in the OPAC.

The visibility of Makerere Lib was also enhanced as its catalogues are online, & accessible from anywhere in the World

Partnerships between MAK & other institutions were established.

### **2.2.2 Implementation of e-Learning by DICTS**

As many as 100 academic staff were trained in creating online courses (7 evaluated courses, 30 in development). E-Learning Management structures within MAK University were setup and E-Learning infrastructure in priority faculties with partial funding from NORAD was also Setup. Makerere is now a partner in an African University consortium developing an E-Learning platform (KEWL) specially tailored for our conditions (partial IDRC funding).

### **2.2.3 Building Capacity of Technological Instruction & Establishing New ICT Linkages by Dept of Women & Gender studies**

Carnegie provided financial support for equipment & skills development. NORAD had an input on the computers. The achievements and outcome are as below.

The Dept of Women & Gender Studies has built capacity among staff & students in the use of ICT in teaching, learning and research skills. Members of staff have developed regional and international web-based courses, while students have made improvement towards articulation of gender issues. They report improved self confidence to participate in discussions, use of skills gained in gender and technology in other non-gender courses.

Emphasising Gender Technology as a backbone for all ICT programmes in the Dept is increasing the number of females with ICT skills.

The Department houses the Regional Centre for IT Essentials. The course of IT essentials has graduated 289 students (52% females and 48% males). It is also the first Department to run the Cisco Networking Academy (CCNA) Academy in Africa. Altogether, 411 students (56% females and 44% males) have graduated and 92 students have been admitted to either a Bachelor of Information Technology or Bachelor of computer Science. Most (84%) graduates of IT Essentials and CCNA have been employed and those already employed have been promoted. Staff have developed regional and international web-based course. These activities have gained the Department local & international visibility in the area of gender and ICT.

## **2.3 Human Resource Development through Graduate Training & Research**

### **2.3.1 Enhancement of Research at MAK by School of Graduate Studies**

Through Carnegie support, 38 PhD were facilitated of which 80% have completed their programs in various Universities and majority of those who have completed have made publications in referred journals. Of these 40% have already applied for promotions in their respective units. These are ensuring continuity and sustainability of human capacity at Mak.

A data base for Research Management and Coordination System (RMACS) was innovated in partnership with Directorate of Information and Computer Science and Faculty of Computing at Makerere University. The database had had achievements *vis* 3,820 graduate researches, 2150 theses and dissertation, 566 Academic/scientific publications and 320 Research projects have been captured. In addition, a server is already installed and data uploaded onto the Makerere web page to assist the entire research community in research quality control, improve networking, and reduce/minimize plagiarism.

As a result of the increased enhancement of capacity and research outputs from Makerere University, the National Council of Science and Technology alluded to the fact that 70% of the national research and innovations are direct contribution from Makerere University.

The successful implementation of this and other projects at Makerere has attracted Sida-SAREC, NORAD to supporting capacity enhancement for PhD research and Supervision and others.

## **2.4 Strengthening Organizational & Technical Institutional Capacity for Resource Mobilization & Strategic Business Planning**

### **2.4.1 Development of Resource Mobilization Capacity at MAK by PDD**

This project is co-funded by the Norwegian Government. Carnegie funds were initially withheld pending recruitment of 3 members of staff to PDD dedicated to resource mobilisation, coordination of donors as well as local & international University relationships.

Now, the Deputy Director Resource Mobilisation reported & is working; the Development Officer Prospect Research also reported & working a revised work plan is now in place and being implemented. The university's ability to mobilise resources and allocating them according to strategic priorities is envisaged in the long term to help the University enjoy improved funding from diversified sources for sustainable development.

## **2.5 Institutional Relevance and Quality Assurance through Tracers Studies and Quality Assurance**

### **2.5.1 Tracer Studies to Ascertain Employment Opportunities of MAK Graduates from the Faculty of Medicine**

Through the Tracer study project of the PDD, Carnegie Corporation has supported tracer studies of graduates from Science based faculties to help it identify factors that are key to the production of relevant graduates to the community. The findings of the study will also be useful for the planning and will also be fed into Quality Assurance project so that piloting Quality assurance at Makerere will be more informed.

### **2.5.2 Development of Quality Assurance (QA) Framework at Makerere**

This project was modified from Cost analysis research, to building capacity for QA. The planning phase of the project analysed the existing situation at MAK with respect to Quality Assurance. The second phase with focused on the development of a Quality Assurance (QA) framework. The proposal for the second phase of the project had some problems and is therefore being revised.

### **2.5.3 Sustainable Enhancement of Science Practical Training and Research**

The projects under listed have contributed to the relevance and market responsiveness of Science curricula towards sustainable national development.

### **2.5.4 Development of capacity in valuation and quantity surveying in the Faculty of Technology**

This project achieved its aims beyond the original objectives. Three market driven programmes (i) quantity surveying, (ii) valuation surveying (land economics) and (iii) construction management were established. A total of 100 students were admitted in the first cohort, far more than the original planned in-take of 15 students and as a result a new Department of construction economics and management fast growing into the largest department in the Faculty of Technology was established.

### **2.5.5 Enhancement of Practical Training in the Faculty of Vet Medicine**

The implementation of this project led to improved scientific presentations by students as a result of availability of scientific equipment, access to the internet as well as audio-visual aids. The lecture time has necessarily reduced, leading to increased time for student self learning, and staff time for research in some Departments of the faculty. In the long term the number

of research projects from staff will increase as well as number & quality of publications from staff.

University technical staff (previously Diploma holders) that were supported to the Bachelor of Laboratory Technology programme have got renewed desire to grow professionally. Most of them have signed up for Masters courses while those who received attachment training at the International Livestock Research Institutes have broadened their skills, and made vital contacts and Networks.

### **2.5.6 Building Faculty of Medicine Capacity for Social Responsiveness to Slum Communities around the Medical School**

This project has promoted the University's social responsiveness to the community through training and research. The 25 Researches conducted involving 253 students & 35 staff members in 6 parishes has led to participation of many staff members from various departments, in supervising students research in communities. Team work spirit developed in students from year one to year four and from all programs in the faculty. There has been exposure of students and staff to realities of slum life at their door steps to which some had never been exposed to before. There is now collaboration with Kampala City Council Health Dept in tackling the health problems of the surrounding slums based on evidence generated from the research. The research findings were published in 2 issues of the Makerere Medical Journal.

### **2.5.7 Distance Science Education, Strategic Framework and Policy Formulation by Institute of Continued Adult Education**

This project has promoted access to science education through alternative education modes of delivery. Makerere was opened distance education access to 210 scientists through the BSc (External) programme. Up to 4 Distance Education Regional Study Centres with networked ICT facilities & Internet connectivity were established & equipped. As many as 92 science study materials developers have been trained and they have developed 60% of the required learning materials for the B.Sc. (Ext) programme. Four study visits to 4 dual-mode Universities, were conducted, valuable lessons were earned and linkages were hatched.

A comprehensive external evaluation of Distance Education programmes at Makerere University was conducted and a report is available for follow up.

## **3.0 Other Activities Supported by Carnegie**

### **Formative Evaluation by ERA:**

The Cooperation commissioned the *Evaluation Research Agency* (ERA) of South Africa to put in place processes & procedures to would monitor & evaluate the design, implementation, delivery and impact of its Institutional Support program to MAK. In April 05: ERA visited MAK to establish conceptual clarity, internal consistency & empirical feasibility of associated interventions and In Sept 2005 ERA conducted a 3-day workshop on Logic Model Concept for project M&E. 23 participants representing all project team implementers attended and developed new logic model matrices for their projects. They also did in-depth analysis of the implementation processes & evaluated their projects. The logic model has paved a way for easy reporting.

### **Fundraising –Fundamentals:**

Two consultants trained project implementers on how to write winning proposals for funding.

### **Mortenson Centre Postgraduate Diploma in Monitoring and Evaluation methods:**

This is a training program offered by the Department of Sociology and Social Anthropology at the University of Stellenbosch, South Africa.

## **4.0 LESSONS LEARNT**

The University needs to continuously study the dynamics of the economy and the market and design new academic programmes and revise on-going ones to address gaps identified.

Capacity building is a continuous process, hence there is always growing demand as new people come, others retire, relocate service. In the area of ICT, Information literacy training has to be an on-going activity due the rapid changes in ICT.

Community research enhances bonding & cooperation between communities, and makes the university more relevant to the communities immediately surrounding it and to other stakeholders.

National & Institutional policy environment grossly affects implementation of innovative programmes, such as distance education, e-learning, and gender mainstreaming thus requiring regular policy reviews. Even after the policy environment improves, there is need for resources to kick-start and sustain such innovations.

Institutional research can have spin-offs that enhance research benefits and sustainability

## 5.0 CHALLENGES

The Carnegie Corporation has enabled the university make a lot of progress in terms Gender mainstreaming and access to resources through ICT equipment and network throughout the University. Big steps have been achieved to enhance use of the ICT through End user training programmes in as well as training staff and students in e-learning. The university sees herself as being more relevant to the community because of the new programmes and outcomes from projects in the science based disciplines. The university is now moving more towards organisational and operational efficiency as a result of the Resource mobilisation projects and Quality assurance once that project takes off. In the implementation of these activities however there have been challenges that have hindered smooth implementation of the objectives and therefore progress towards the goal. Some challenges have however been addressed while others still have to be overcome as highlighted below.

### 5.1 Inadequate Funding by Government

The continuous reduction in Government funding has meant that some of the planned objectives cannot be met. The budgetary constraints have further confounded the inadequate staff capacity since staff who leave university service are not easily replaced. There is also high staff turnover including project leadership when people seek employment elsewhere.

The university had intervened by increasing private student's Fees however this was put to a halt until an undefined date. The university has also revised the recruitment procedures to hasten the process of staff replacement.

### 5.2 Dynamics of adaptation to new National procurement regulations

Owing to the transitions in Public Assets Procurement Act, and transition from the Old Makerere Act to the New Universities and Other Tertiary Institutions Act 2001, there are now new & longer procurement procedures. Local vendors have therefore met challenges in keeping up with Makerere's needs, which leads to delays in procurement and delivery of goods and services. The Global Economy leading to Currency fluctuations has also meant a necessity to revise already agreed on budgets. The university plans to undertake university wide in-house training on the new procurement procedures and regulation in order to reduce the delays.

The affirmative action to involve more women in University science education both internal and external has been hampered by the fact low numbers of Girls taking science at Secondary School level as well as National low capacity for science teaching. To deal with this challenge, the University has taken affirmative steps to encourage girls in secondary school to take sciences

through direct visits, talk shows on national print and electronic media.

For ICT and Library information resource, re-directing the entire University in adapting to new changes based on systems approach will take a long time. E.g. ICT-based management, some units still lack basic infrastructure such as equipped laboratory, computers and other infrastructure. In addition building confidence for data sharing, net-working in diversity and interdisciplinary manner requires rigorous sensitization.

Graduate Students have very limited and very constrained infrastructure hence, research environment does not offer high level capacity yet, there is large number of students demanding knowledge at graduate level. This is worsened by the limited funding to support research related activities. There is also a high student: staff ratio which undermines or constrains staff time for research and publications and building network.

## 6.0 WAY FORWARD

In order to realise further steps towards Institutional Development the university wishes to do the following

1. Continued Fundraising from other donors to broaden resource base, for the continuation of the activities started
2. Establish as Quality assurance unit to oversee all quality related activities in the University. The unit will employ various tools to help it assess and monitor Quality assurance in teaching, research outreach and service delivery. It will make use of tracer study reports and other findings as a guide Quality assurance
3. To orient project implementers who have not yet done so in procurement procedures
4. Continue and engage in more rigorous affirmative actions that will encourage women and other disadvantaged gender to take up higher secondary and university education especially sciences.
5. Continued capacity development through strengthened research capacity and graduate training. The School of graduate studies in going to identify multidisciplinary themes for staff and student research that will bring impact to the grass root for sustainable development. This is also envisaged to improve the current limited research funding status by attracting funds some which can contribute to raising infrastructure.
6. Strengthen the human resource development through support of more technical staff in science disciplines to upgrade to degree level in Bachelor of laboratory Science and support those who graduate to post graduate level and or attachment to international laboratories.

## **7. ACKNOWLEDGEMENT**

*Makerere University is very grateful to the Corporation for the financial support that has enabled it to implement its strategic plan. We are particularly grateful to Dr. N Matos for the advice, mentoring & moral support and also to Ms A Johnson for the numerous inputs and the various stakeholders for the contributions at various levels, all of which have been made to ensure that MAK achieves what it set out to do.*



# Infectious Diseases Institute, Report for the Stakeholders

By

Prof. Nelson Sewankambo  
Dean, Faculty of Medicine

## Executive Summary

The mission of the Infectious Diseases Institute (IDI) is to build capacity in Africa for the delivery of sustainable, high quality HIV/AIDS care and prevention through training and research. IDI has five operational areas through which it works to achieve its mission: clinical care; training; prevention and outreach; research; and laboratory services (provided through a partnership with the Makerere University-Johns Hopkins University Core Lab).

IDI has a legal structure that is unique within Makerere University: it is a Ugandan company limited by guarantee and registered as a non-government organization (NGO). The NGO is owned by Makerere University, but governed by a Board of Directors that includes representatives from a number of constituencies relevant to IDI's work. IDI has operational and strategic autonomy, but contributes to achievement of the university's strategic plan through approaching the university's major strategic areas with an eye to improving Uganda's development and utilizing international better practices.

One of IDI's increasing emphases is utilizing academic activities to facilitate better practices related to HIV/AIDS care in society at large. IDI is working with non-academic partners to facilitate three initiatives to this end:

- *The Creativity Initiative* will build a network of peer supporters to promote adherence to HIV treatment programmes at the community level;
- *Support for Kampala City Council (KCC) Clinics* will improve capacity of KCC clinics to provide comprehensive care—including ART—to more people living with HIV/AIDS (PHAs) in Kampala; and
- *The Partnership for AIDS Treatment Providers (PATREP)* will coordinate treatment provision in Kampala in order to improve ART access and increase the likelihood of greater adherence among more people taking ARVs.

IDI attributes its successes to date to five points: independence; partnerships; the relationship between research, training and clinical care; capacity building; and sustainability.

## 1.0 The Infectious Diseases Institute

### 1.1 Background

Throughout the 1980s and 1990s the challenges related to HIV/AIDS prevention and care became increasingly clear to doctors in Uganda. As part of the effort to mitigate them, nine prominent doctors from Mulago Hospital and the Makerere Medical School joined forces with five colleagues from North America to form the Academic Alliance for AIDS Care and Prevention in Africa. This group endeavored to develop the infrastructure for state-of-the-art treatment, training and research related to AIDS and other infectious diseases. Through a generous grant from Pfizer Inc, they established the Infectious Diseases Institute (IDI), which was opened by President Museveni in October 2004.

### 1.2 Mission

To build capacity in Africa for the delivery of sustainable, high quality HIV/AIDS care and prevention through training and research; IDI has five operational areas through which it works to achieve its mission:

*The Clinical Care Programme* has been developed as a transferable model for quality care and antiretroviral therapy (ART) delivery. It is the foundation of the research, training, prevention, and laboratory programmes. IDI has a current adult patient load which exceeds 8,000 active patients (meaning those who have visited IDI within the past six months); the active paediatric patient load (in this case those who have visited the clinic at least once in the past three months) is over 2,500. Patients benefit from enrolment in clinical research studies and from interaction with health care providers in IDI's intensive HIV training programmes. Clinical care at the IDI is part of the Mulago national referral system, and aims to make quality care, including ART, accessible to all.

*The Training Programme* focuses on equipping health care providers to deliver ART and comprehensive care, and to establish excellence in clinical practice. Curricula development and training are offered through partnerships with the Infectious Diseases Society of America (IDSA) and the Makerere University Faculty of Medicine. As of the end of 2005, 334 doctors from 21 countries had graduated from IDI's one month course; 197 nurses and medical officers had graduated from a shorter multi-disciplinary course. A newly launched programme enables participants to engage in one and

two-week modular follow-up sessions on specific topics including practical clinical training; ART and Epi Info Research in HIV Care; paediatrics and prevention of mother to child transmission; better practices in training others; nursing care and clinical management; pharmacy management; and HIV prevention in a health care setting.

*The Prevention & Outreach Programme* is an integrated care, research and prevention programme concerned with both HIV positive and negative people. Focal points for the programme include research and programme development in hospital based HIV testing, ART adherence, validated care protocols, new lab-based technologies, behavioural research and surveillance, public health messages, and the provision of current HIV treatment information. Keeping HIV positive people healthy and reducing HIV transmission in the context of ART are the long term objectives of the programme.

*Research* at IDI makes use of the large patient base, and is central to improving care, prevention, training, and laboratory services. Current research is being conducted in the areas of clinical trials, operational research, prevention, and lab-based research. Outcomes will produce results that will hopefully improve the way that care is provided in Africa.

*Laboratory Services* at IDI are provided through a partnership with the Makerere University-Johns Hopkins University Core Lab. IDI benefits from the quality of lab services provided by this College of American Pathologists accredited lab.

## 2.0 IDI in the University and National Context

### 2.1 IDI's Relationship with Makerere University

IDI has a legal structure that is unique within Makerere University: it is a Ugandan company limited by guarantee and registered as a non-government organization (NGO). The NGO is owned by Makerere University, but governed by a Board of Directors that includes representatives from a number of relevant constituencies: Makerere University, government, non-government organizations, Mulago Hospital, industry, regional organizations, and the Academic Alliance. The programmes and services of IDI are integrally connected to the activities of Makerere University. At the same time, IDI has operational and strategic autonomy.

The Faculty of Medicine has a particularly strong relationship with IDI. Members of the Faculty have contributed to the vision, and have provided valuable input to programme development. Currently they regularly assist by serving as facilitators in the Training Programme; acting as investigators for IDI research projects; and serving as members of the IDI Board and the Senior Management Team.

## 2.2 IDI and the Makerere University Strategic Plan

In response to persistent criticism that higher education does not relate to the needs of society, The Makerere University Strategic Plan emphasizes the need to increase the applicability of its activities to Uganda's development. The work of the Infectious Diseases Institute fits well within this objective:

- *Teaching and learning:* IDI provides continuing education to people across a range of professions and professional levels.
- *Research:* IDI conducts research that aims to improve care of infectious diseases in the African context.
- *Organization and management:* IDI represents a progressive model of independent governance coupled with transparent financial systems.
- *Human resources development:* IDI's human resources development activities reflect international better practices.
- *Physical infrastructure:* The IDI building was the first new construction at the Faculty of Medicine campus in approximately twenty years.
- *Generation of Funds:* IDI is establishing a department to focus on acquisition and management of resources.

One area that clearly needs more attention is how to utilize academic activities to facilitate better practices related to HIV/AIDS care in society at large. Makerere University has also defined this as a priority. IDI is working with non-academic partners in the development of three initiatives to support better clinical care throughout Kampala:

### 2.2.1 The Creativity Initiative:

The Creativity Initiative is a client-led scheme designed to improve the ambience of a busy HIV/AIDS clinic and to build a network of peer supporters who promote adherence to HIV treatment programmes. The long-term goal will be to provide support at the community level.

Through this exciting endeavor clients join with volunteers to develop creative communities in the clinic. They sing and dance; draw and paint; facilitate interactive board games; impart entrepreneurial and life skills; share testimonies; and provide spiritual and social support.

The initiative is facilitating a dramatic change in the clinic's atmosphere, as well as in clients' abilities to care for and encourage others receiving treatment at IDI. Clients are

gaining the courage and confidence to tell their poignant stories. They are taking responsibility for care and encouragement of new clients. And as the Initiative matures they are expressing a desire to move out into their urban communities; several of the group leaders have already received training in the provision of peer support to PHAs.

Ensuring adherence to prescribed treatment is essential if we are to avoid the worst-case scenario of widespread resistance to ARVs in Uganda. However, it is those taking medicine that ultimately need to take responsibility. There are numerous challenges to doing this over a life-time, and people constantly face the risk of being stigmatized; this sometimes prevents them from asking for the help and support they need. Through The Creativity Initiative people are able to access social support. That is the most important aspect of care that anyone can provide.

### **2.2.2 Support for Kampala City Council (KCC) Clinics:**

There is a tidal wave of demand for ART in Kampala. Free drugs are available from various donors, but most Kampala residents cannot access them because health facilities are not equipped with the infrastructure and human resources for starting and monitoring people on ART. Through this initiative, IDI will partner with Mulago Hospital and KCC to build the capacity of KCC clinics to provide comprehensive care—including ART—to more PHAs. Care will be accessible through a tiered system with the capacity for referrals between tertiary and primary care centres. Specific activities will include: conducting an assessment of KCC facilities' abilities to provide HIV Care; training trainers in HIV care; conducting facility-level training and continuing education in the areas of counseling, quality care, drug tracking/pharmacy management, laboratory services, and data management/communication; and developing shared data management and communication systems to strengthen referrals between facilities.

The result will be a larger number of trained care providers at KCC clinics, more PHAs receiving high-quality care and access to ART, and an improved health infrastructure and referral system. Tertiary care facilities will be decongested, allowing them to focus on complex cases that cannot be treated elsewhere.

### **2.2.3 Partnership for AIDS Treatment Providers in Kampala (PATREP)**

There is an urgent and serious need to strengthen the coordination of HIV/AIDS care and treatment in Kampala, particularly with regard to ART. Lack of coordination between treatment providers has created an almost impossible situation: treatment providers are overwhelmed; many do not know where to refer cases that they cannot handle; there is no specialization in care—all facilities are handling both primary and tertiary care; and lack of coordination enables clients to “shop around for services” which creates the risk of increasing

resistance to ARVs resulting from gaps and switches in treatment. Coordination would contribute to improved access and an increased likelihood of greater adherence among more people taking ARVs.

A stakeholder “Partnership of AIDS Treatment Providers” has been established to spearhead this coordination effort. PATREP is led by the Uganda AIDS Commission and provided with technical support from a number of treatment providers in Kampala, including IDI. Specific activities will include development of a treatment referral system in Kampala; implementation of a “Path to Health” card; training and capacity building to ensure that treatment providers are able to implement better practices in ART delivery; support for successful models of strengthening adherence; promotion of prevention programmes to accompany treatment programmes; and coordination of relevant advocacy efforts. This coordinated approach will hopefully serve as a model for similar efforts in other urban centres in Uganda and other parts of Africa.

## **2.3 IDI and Uganda's Poverty Eradication Action Plan (PEAP)**

IDI's activities contribute to the Human Development efforts outlined in PEAP, particularly with regard to health and education:

- One priority action is “curriculum reform to emphasize science and technology in a broad higher education context” (p. 162). While IDI does not specifically assist in the development of the Makerere University curriculum, collaboration between IDI and the Faculty of Medicine almost certainly strengthens the medical training available from within the Faculty. Members of the Faculty regularly participate in IDI research and training activities, which helps keep them abreast of new discoveries related to better care for PHAs; this is becoming a critical topic when considering health care in Uganda. In addition, medical students, residents and MMed students are exposed to IDI's work. By the time medical students qualify they will have spent time at IDI, visited the home of someone living with HIV and participated in training on use of ARVs.
- Two priorities for the health sector are “health promotion through IEC messages” and “expansion of VCT, PMTCT, and ART”. IDI is active in both of these areas. Several studies have been facilitated through IDI's Prevention and Research Programmes which have refined prevention messages to be more effective and appropriate in the context of ART. In addition, IDI's clinical activities have a strong focus on ART, which includes prevention of mother to child transmission.

Through its relationship with KCC and PATREP IDI is attempting to align its clinical activities with the government strategy of “Three One’s”: *one national coordinating authority, one national strategic framework for action and one national monitoring and evaluation framework to track the national response.*

- Another priority outlined in PEAP is community mobilization and empowerment (p 174): Although the government has set its own priorities with regard to community mobilization and empowerment, some of IDI’s special initiatives (i.e. The Creativity Initiative) aim to do the same thing—to enable PHAs to become part of the solution to this epidemic, and to enable them to provide support and basic health monitoring of other PHAs in their local communities.

### 3.0 IDI and its Funders

Until now IDI has been funded mostly by money from Pfizer, Inc. However Pfizer funding will progressively decrease over the next three years and increasing percentages of funding will come from other sources.

In order to ensure a systematic focus on resource generation activities, a Grants Generation and Management Department has been established at IDI. One of the top priorities for the first quarter of 2006 is the development of a strategic revenue generation plan for the Institute. In addition, the Academic Alliance Foundation (US-based) will assist with income generation in collaboration with of IDI.

## 4.1 Measures of Achievement Established by Funders

IDI, Pfizer and the Academic Alliance Foundation have worked together to develop a series of indicators by which IDI’s performance can be measured. They include the following:

### 3.1.1 Qualitative Measures

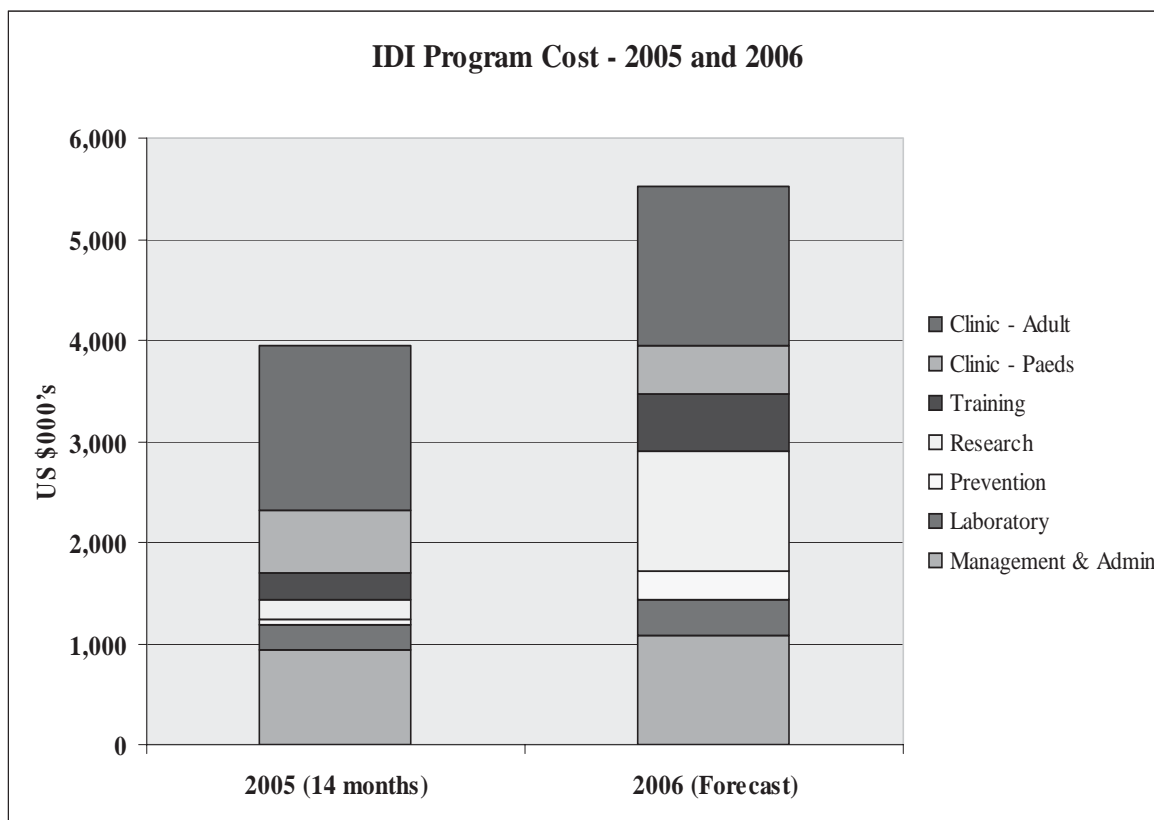
1. Demonstrated progress in advancing IDI programmes consistent with its mission; this should include progress related to key programme areas, major new initiatives, revenue generation, advocacy, governance, and management;
2. Demonstrated progress toward establishing IDI as a leading academic institute training physicians and other health care providers in high quality and advanced clinical care of infectious diseases; IDI should also focus on development of a system to document the multiplier impact of its “train the trainer” programme;
3. Demonstrated progress toward establishing IDI as a leading academic institute committed to research on issues pertaining to HIV/AIDS and related infectious diseases in the African setting;
4. Demonstrated progress toward positioning IDI’s clinical programme as a supporting component of IDI’s training and research programmes; as part of a plan for integrated clinical service for those living with HIV/AIDS in Kampala, IDI will facilitate PHAs to participate in providing community-based support and care for those living with HIV.
5. Ongoing collaboration and communication with major partners on planning and implementation of fundraising strategies.

### 3.1.2 Quantitative Measures

Expected Achievements for 2006	Achievements between May, 2002- December, 2005
<b>Training</b>	<b>Training</b>
300 physicians trained	334 physicians trained
600 health workers trained at all levels	531 health workers trained at all levels
<b>Research</b>	<b>Research</b>
5 publications with an African researcher as first author	6 publications with an African researcher as first author
7 new research studies in progress	15 research studies in progress
3 Sewankambo Scholars supported	3 Sewankambo Scholars enrolled
<b>Clinical Services</b>	<b>Clinical Services</b>
8,000 active adult patients (seen at least once in past 6 months)	8,150 active adult patients (seen at least once every 6 months)
5,000 patients on ART (adults only)	3,816 patients on ART (adults only)
780 new patients (adults only)	Seeing an average of 20 new patients per day (adults only)

### 3.2 Financial Inputs

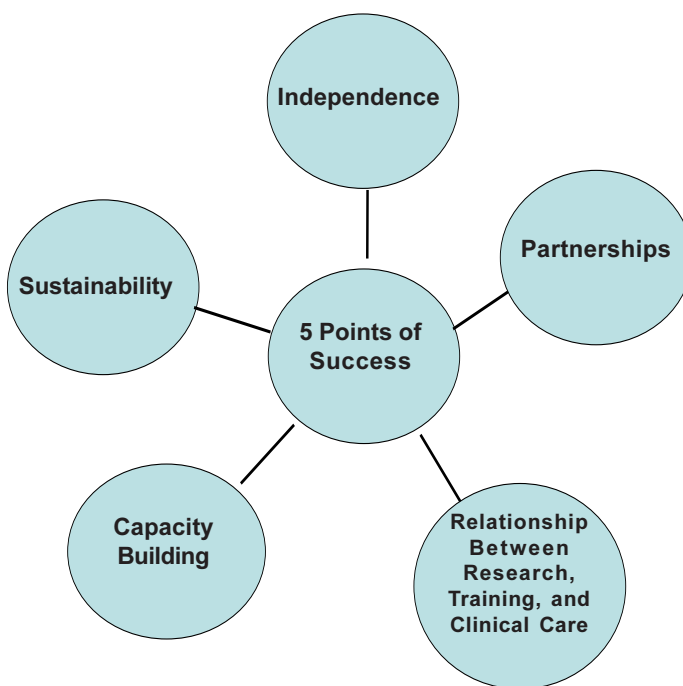
The following graph shows IDI's spending for 2005 and projected spending for 2006. It also indicates how spending is allotted to different activities:



### 4.0 Lessons Learned

DI has a unique position within Makerere University: it benefits greatly from being part of such a dynamic academic environment, but at the same time it has operational and strategic independence. This has proven to be an ideal combination, and perhaps will serve as a progressive model for other Makerere University entities in the future.

IDI attributes its successes to date to five points. Operationally, independence has enabled flexibility and an ability to respond quickly to needs. Partnerships have helped IDI to clarify needs that extend beyond its walls, and to facilitate the exchange of ideas on how to address challenges that affect Uganda at large. IDI's unusual ability to contribute to addressing challenges comes from the way in which research, training and clinical care relate in the IDI setting. However, while it is important to do a job well, in the long run major problems can only be addressed by a broader base of people. Therefore it is important to build the capacity of as many people as possible to do work that is considered important. Finally, sustainability is crucial if an organization is to have a meaningful, long-lasting impact. Therefore sustainability is one of IDI's goals, and whether or not it can be achieved will determine whether or not IDI has been successful.



## 5.0 Challenges

IDI is continually searching for solutions to two challenges:

- The demand for ART at IDI is becoming unmanageable; on a daily basis approximately 20-30 new clients seek treatment. IDI is not the most convenient or appropriate place for many of these people to receive care, but at the moment there are a limited number of facilities in Kampala (and in Uganda in general) that can effectively provide HIV/AIDS care and treatment. One of IDI's main goals over this next year is to contribute to activities that will broaden the base of facilities able to help meet this tidal wave of demand.
- Sustainability is a challenge for any non-profit organization. IDI's current pattern of receiving one to three-year grants cannot be considered sustainable. One of the priorities for this year will be to define the strategic options for ensuring sustainability in the long-run.

## 6.0 Way Forward

IDI will continue to strengthen its integration with Makerere University, largely through mutual sharing of knowledge and practices.

- *Teaching and learning:* Faculty of Medicine staff will continue to be recruited to facilitate training at IDI. Once funds become available, mechanisms will be put in place to ensure that Faculty of Medicine students also benefit from IDI's training programme.
- *Research:* Makerere University faculty will continue to be actively involved in research projects sponsored by IDI. Results will be shared through seminars, publications, and other forums accessible to all Makerere University faculty.
- *Organization and management, human resources development and generation/management of funds:* IDI's model will hopefully serve as a progressive model of governance that can be used by other Makerere University entities in the future. IDI will provide advice on this model—and its specific management practices—as requested.

IDI's primary goal is capacity building—through training, application of research results, and application of lessons learned from systems development activities. Academic institutions represent a key category of organization slated for IDI capacity building efforts in the region. Makerere University, as IDI's institutional home and as a leading academic institution, will certainly be integrally involved in these activities.

# THE MAKARERE UNIVERSITY CAPACITY BUILDING PROGRAM FOR DECENTRALIZATION:

## Relating Higher Education to the Needs Of Society Through Partnerships under the I@mak.com

### 1.0 Background

The Government of Uganda adopted a policy of decentralization in 1997 as a vehicle for improving good governance, taking services nearer to the people and reducing poverty from its population. This policy led to creation of an additional number of sub-national governments, called local governments, to which political power and the responsibility for delivery of services were devolved. As a result the number of districts increased from 39 to 56 and municipalities increased to 13 giving a total of 69<sup>1</sup> higher local governments and close to 1000 sub-counties. The centre retained the responsibility to formulate policy, develop standards, build appropriate capacities in local governments, mentor local governments' staff and monitor and evaluate service delivery.

However the creation of a large number of local governments was never matched with the required capacity building. Transfer of resources from the centre to the local governments has not matched the transferred roles and responsibilities and consequently there are not enough resources in local governments to meet their service delivery mandates. Accountability for public funds is still very poor. The budgeting and planning is still poorly done. Plant equipment is poorly maintained. Management skills are poor. These and other many weaknesses have greatly impacted on the delivery of quality services entrusted to local governments. Some Central ministries did not and still have not prepared themselves for these changes. Therefore there was, and there still is, a big need to build capacities in both the local governments and the centre in order to meet the challenges of decentralised service delivery.

Accordingly Government and the civil society, with the support of donors and NGOs, did carry out a number of capacity building interventions. However, the interventions had been un-coordinated and largely supplied as technical assistance through consultancies and or training by foreign firms. There had been no deliberate involvement of local Higher Education Institutions like Makerere University in these interventions. This made most of the capacity building programs unsustainable especially after the foreign aid runs out. In spite of these interventions there still exist a number of resources and skills gaps required to meet the expected service delivery standards.

Universities and / or other Tertiary Institutions in Uganda would be strategic partners in capacity building programs because they locally produce most of the human resources involved in the direct service provision for both the centre and the local governments. This home grown strategy would be more sustainable and at the same time create capacity within the local institutions to meet the needs of their communities.

To address this challenge, Makerere University, Rockefeller Foundation and Government agreed to work together establish mechanisms to re-orient its curriculum and research activities to meet the new needs of service delivery under a decentralized environment.

A new partnership was developed between Makerere and Government and Makerere to work together to address the capacity needs for service delivery.

### 2.0 Objective

The project's overall development goal is to support Uganda's efforts aimed at improving the quality of decentralized public service delivery and management at local government levels through local institutions of higher education. Through the capacity building program, Makerere University is well advanced in achieving this development goal. This is being accomplished through activities such as:

- ✓ Building appropriate and adequate capacities at Makerere University to provide relevant skills and competencies among its faculty and students to support effective, decentralized services delivery;
- ✓ Supporting capacity building interventions by Makerere University and selected collaborating institutions of higher learning on a pilot scale in eight local governments of: Arua, Mbale, Kampala, Rakai, Sironko, Yumbe, Mbarara and Ntungamo districts<sup>2</sup>
- ✓ Supporting research and policy formulation capacity related to decentralization in a number of units that would give relevant support to decentralized service delivery;

<sup>1</sup> The number has since increased to about 85 higher local governments following the creation of new districts in 2006.

<sup>2</sup>The number has since increased to 15 with the creation of new districts from these. Mbarara has been split into 4, Arua into 3, Mbale into 2. Rakai into

- ✓ Developing an innovative model for collaboration with other suitable training and research institutions across Uganda, with the goal of including valuable inputs in curriculum development and expanding the outreach and coverage of relevant training programs;
- ✓ Using a Local Government level demand driven approach to the design of programs and courses as opposed to the traditional supply driven training.

Applications for support grants are considered on a competitive basis on a first come first serve basis. Committee members are guided by a set of guidelines which are reviewed every six months to reflect any new lessons or experience gained over a six months' period.

The day to day activities of the committee are managed by a Secretariat which comprises of full time staff and part time staff who have other responsibilities within the university set up.

### 3. Operational Arrangements

The program uses highly participatory approaches in extending support to transformations and identifying innovations. The program is steered by a committee which comprises of academicians from Makerere University and partnering institutions; practitioners from central government ministries, local governments as well as deriving from experiences of an international member from other African Universities.

Collaboration is not only limited to national institutions but it extends to development partners where we have a joint collaborative financial support from Rockefeller Foundation and the International Development Association of the World Bank. This provides lessons which will have future application.

All supported activities are phased and disbursements are based on approved deliverables at each phase. The committee reviews and approves the deliverables at each stage of disbursement. The following phases apply to different proposals.

#### Curriculum<sup>3</sup>

Phase	Concept	Feasibility	Pilot	Full implementation curriculum(Footnotes)
Deliverable	Concept paper and application for feasibility study grants	Feasibility report and a proposal for Piloting a proposed curriculum	Pilot implementation report and an application for Full implementation	Full implementation report
Disbursement	✓	✓	✓	X

#### Training<sup>4</sup>

Phase	Concept	Feasibility	Pilot	Full implementation curriculum(Footnotes)
Deliverable	Concept paper and an application to develop short / usually refresher course	Feasibility report and an application to pilot the training materials for the short course.	Pilot report & proposal for full implementation	Course Full implementation report
Disbursement	✓	✓	✓	✓

#### Publication<sup>5</sup>

Phase	Concept	Pre-manuscript Activities	Draft manuscript	Publishing <sup>6</sup>
Deliverable	Concept paper and an application for Pre-Manuscript activities	Pre-manuscript report and a proposal to do a full manuscript	Draft Manuscript	Publication
Disbursement	✓	✓	✓	✓

<sup>3</sup> For curriculum and training, the committee engages a practitioner to evaluate the course content for its adequacy and relevance to service delivery challenges.

<sup>4</sup> Preference is given to short courses that cut across a number of disciplines / sectors.

<sup>5</sup> A formal contract is made between the Committee and the Principal Investigator. We however promote multiple rather than single author publications.



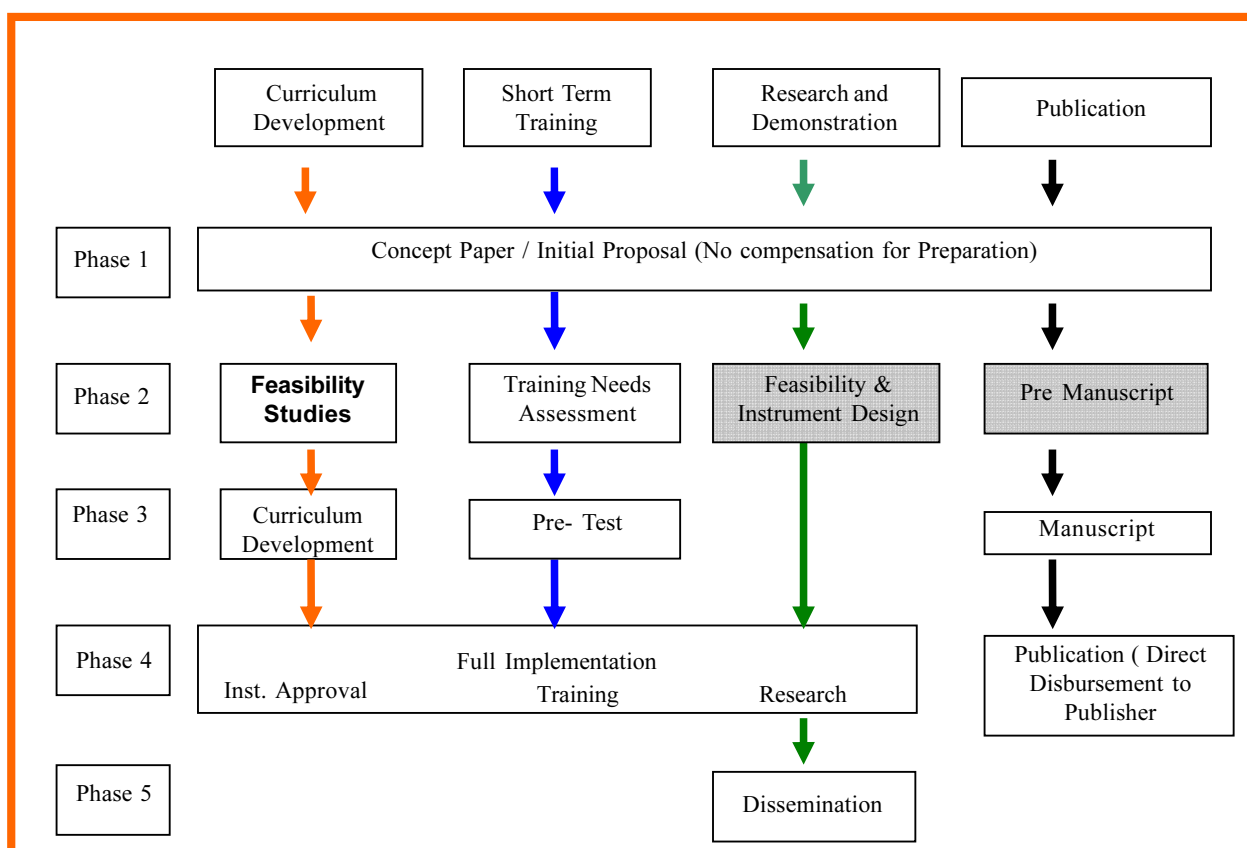
## Research

Phase	Concept	Feasibility	Full Research <sup>7</sup>	Dissemination
Deliverable	Concept paper and application for feasibility study support	Feasibility report and a proposal for full research.	Report and / or papers for publication	A proposal for disseminating research results.
Disbursement	✓	✓	✓	✓

## Demonstration/Extension

Phase	Concept	Feasibility	Full Implementation
Deliverable	Concept paper and application for feasibility study support	Feasibility report and a proposal for full research.	Report and / or papers for publication
Disbursement	✓	✓	✓

No payment is associated with the final deliverable. Investigators / beneficiaries of our grants have been responding positively.



Source: *The Learning Innovations Loan Funding towards Capacity Building for Decentralization in Uganda* - a paper presented at the Management of Innovations Fund workshop in Maputo-Angola by Samwiri Katunguka. 11<sup>th</sup> October 2005

<sup>6</sup> The project enters into a separate contract with a professional publishing house to undertake publications on behalf of the committee

**Figure 1: Summary of Phased implementation of the various proposals discussed above.**

## **4. Evolution of the Capacity Building Program**

The capacity building program has evolved through the following phases since 2000:

### **a. The Planning Phase.**

This was a planning phase that was undertaken by a Planning committee discussed earlier constituted by the Vice Chancellor Makerere University in consultation with the Permanent Secretary Ministry of Finance, Planning and Economic Development. This was the first time that Government and a higher education institution worked together to plan for human resource development including strategies for capacity building directly aimed at improving service delivery. During this phase a comprehensive proposal for possible support to build some of the critically needed capacities to support the already ongoing capacity building interventions was developed and submitted to both the Rockefeller Foundation and World Bank for possible support.

### **b. Proof of Concept Phase:**

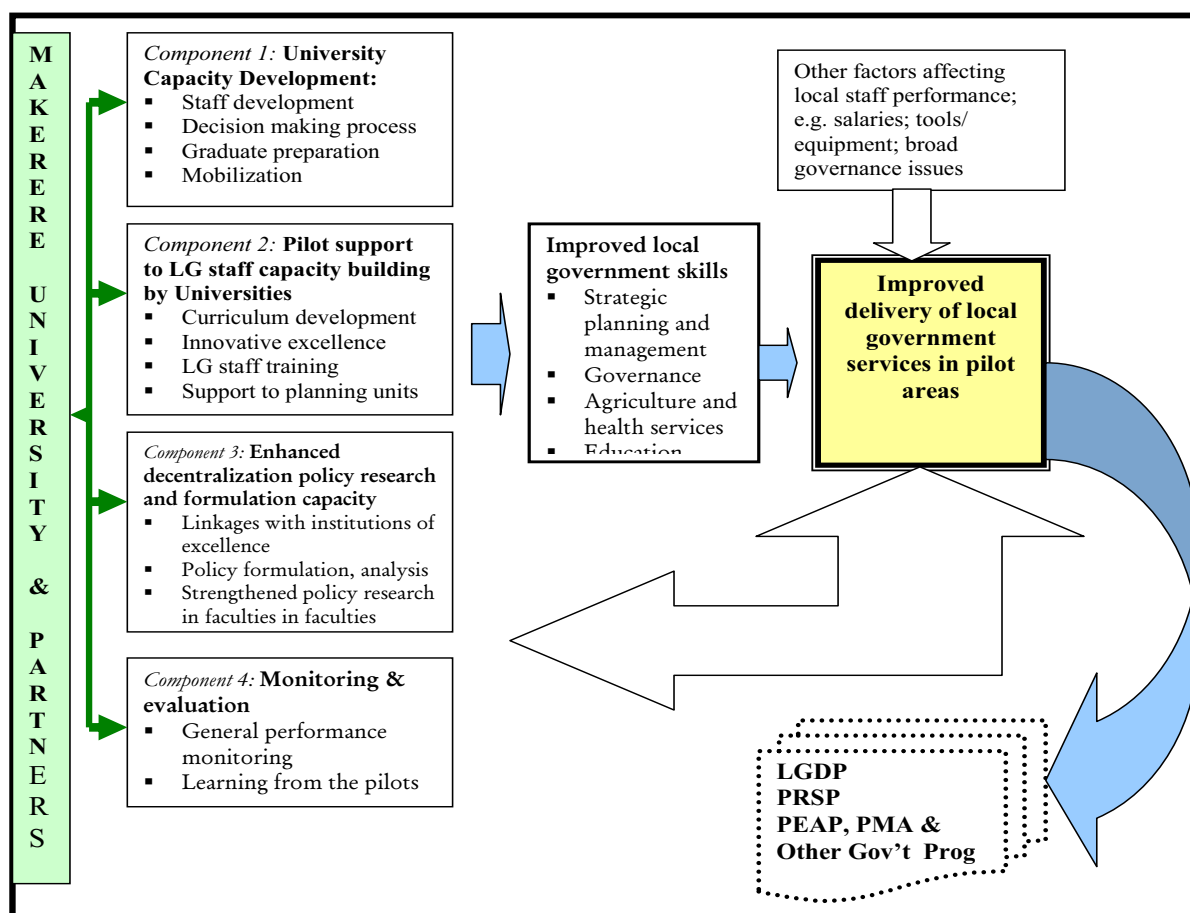
The second phase, which was funded by the Rockefeller Foundation, can be looked at as a proof of concept phase. This phase, which ran from 2001 to 2002, tested the ideas that had been developed during the planning phase. The Rockefeller Foundation extended a grant of USD 3.9 Million to kick-start the implementation process during which initial key lessons that were learnt helped to develop guidelines that were to guide future implementation phases. The planning committee evolved into an implementation committee, commonly known as the “Innovations at Makerere Committee”. The activities of this phase were implemented by Makerere University only under the supervision of the committee. During this phase, both the Government and Rockefeller Foundation successfully lobbied support for the Capacity Building Program from the World Bank. Key lessons were documented and guidelines were developed on how to access funding support from I@Mak.com

### **c. The Pilot Phase:**

The third and current phase is jointly funded by a grant of USD 5 M from the Rockefeller Foundation and a Learning and Innovations Loan (LIL) of 4 M SDR (Special Drawing Rights) from the International Development Association of the World Bank to the Government of Uganda. The activities of this phase directly build on the lessons learnt and the challenges encountered in the previous two phases. Unlike in the previous phases however, the activities were limited to only those key sectors / disciplines that were agreed with Government to have a strong potential to contribute towards poverty reduction. The implementation of activities of this phase was also limited to 8 pilot districts including urban

councils therein. It was believed that this limited scope would help test a number of ideas regarding capacity building for improved service delivery, which ideas would then be rolled out. Therefore the phase was implemented as a pilot under the title “Decentralised Service Delivery; a Makerere Training Pilot Project”.

The “Decentralised Service Delivery; a Makerere University Training Pilot Project” was initially designed to run for three years starting in July 2002 and closing in December 2006. As mentioned above support was limited to six priority disciplines of (i) basic health and medicine, (ii) agriculture, (iii) engineering, (iv) education, (v) ethics and governance as well as (vi) financial planning and management. These were the areas agreed upon with Government to have a strong potential to impact on poverty reduction. Also instead of working in all districts in the country, the project decided to work in eight pilot<sup>8</sup> districts of Arua, Yumbe, Mbale, Sironko, Mbarara, Ntungamo, Rakai and Kampala. A major implementation shift in this phase was the collaboration with five (5) other universities and one other degree awarding tertiary institution. The collaborating institutions are Islamic University in Uganda (IUIU), Mbarara University of Science and Technology (MUST), Nkumba University, Uganda Christian University Mukono (UCU), Uganda Martyrs University Nkozi (UMU) and Uganda Management Institute (UMI). The collaboration benefited from the relative strengths of each of the institutions. The pilot was aimed at generating experiences and lessons for sustainable capacity building interventions to support improvements in service delivery that can be replicated in other local governments. Another major activity undertaken during this phase was a deliberate attempt to monitor and evaluate the overall performance of the project. Finally this phase would identify those activities that would be scaled up and lay a strategy for sustainable roll out. The following chart gives a schematic representation of Phase 3 of the capacity building program that has been running effective December 2002.



### Financial Indications

Phase	Period / Time	Amount Granted (USD)	Source of Funds
Planning Phase Foundation	2000	0.2 M	Rockefeller
Proof of concept phase Foundation	2001-2002	3.9 M	Rockefeller
Phase 3 Foundation	2002-2006	5 M	Rockefeller
		5.742 M	IDA
		3 M	RF – Additional

Grant

The capacity building program has therefore received close to USD 18 million from two of our development partners. These funds have been used to review and or introduce new curriculum within Makerere and other partnering institutions. The funds have also supported the academic staff from the collaborating institutions to conduct relevant research and conduct appropriate training of staff from local governments. Support has also been extended to local government staff to take short term skills building courses , undergraduate courses, and postgraduate studies.

17.842 M Staff from partnering institutions and Makerere has also been trained on relevant short courses aimed at increasing their perceptions and knowledge about decentralization in general and decentralised service delivery in particular. Below are highlights of major achievements.

## 5. Achievements

The program has focused on decentralization as a vehicle for good governance and improved service delivery. The major achievement has been the positioning of higher education institutions particularly Makerere University as strategic local partners to Government in building capacity for decentralised service delivery.

Higher education institutions have demonstrated readiness to revise their curriculum whenever necessary to make them relevant and responsive to the challenges that come up as a result of policy changes at the national level. Specifically higher Makerere University has demonstrated its potential to contribute to the country's poverty reduction strategy through demand driven curriculum review and research. The table below gives a summary of major achievements of the capacity building program for decentralization project at Makerere University pilot phase .

Activity	End of Project Goal	Current status
New Courses on Decentralization Developed	9	13
Field-based Internship Programs Developed	10	8
Students Participating in Internship	300	4,460
No. of Local Government Partners	5	40
Decentralization Training (including ALGAF courses)		
Provided to Stakeholders (Academic, LG staff)	800	457
Undergraduate fulltime Scholarships for LG staff	60	114
Masters fulltime scholarships for LG Staff	20	82
Decentralization Research Projects by Academic Staff	10	50
Master's Student Research on Decentralization Sponsored	15	116
PhD Student's Decentralization Research Sponsored	10	19
Partnerships Operationalised with Other Tertiary Inst.	3	6

As the table shows, a number of significant achievements have been attained over the reporting period (2002-2006). It is worthwhile noting that some of the achievements for phase 3 built on the successes of 2<sup>nd</sup> phase. The achievements include;

1) *Enhanced institutional capacity* building directed at building capacity within Makerere University and five other Universities, one public and four private. The overall aim of this intervention was to strengthen the ability of Ugandan universities to respond to human capacity and research needs of decentralized service delivery within Uganda. The specific attainments through this intervention include: Institutional capacity building involves the following activities:-

### a. University Staff training

University staffs from all the collaborating institutions have had training in decentralization by a partnering institution which has a comparative advantage over Makerere in this area. This training is interactive with the academia with central and

local government staff having round table discussion on service delivery issues. The training enables university staff to appreciate the decentralization environment and the service delivery challenges. The mix of academics and practitioners provides opportunities for the former to appreciate the challenges of service delivery and therefore take appropriate action to address them either through research or curriculum.

### b. Internships/ Field Attachments

- Support to field attachments (also known as internships or field attachments or industrial training or teaching practice). A total of 4,660 students from the Faculties of Medicine, Agriculture, Technology, Education, Social Sciences and the Institute of Adult and Continuing Education have been supported to undertake field attachments. These attachments aim to provide experiential learning for university students where students go into the field (work places) and experience the world of work. This field attachment has given higher education students a deeper understanding of the dynamics of local

governments thus underpinning the theoretical aspects in their fields of specialization.. The attachments program has been well received by the local governments and has fostered the partnership between the University, local governments and the private sector. The field attachments program has also helped to change the attitude of students about working in local governments, which are the single largest employer in Uganda. Besides attitude change, students on field attachments do participate in, and therefore boost, service delivery in the institutions where they are attached.

- Field Attachment Guidelines. Experience with field attachments has been transcribed into a set of internship / field attachments guidelines to guide future field attachments. In particular Makerere University is in the process of mainstreaming field attachments throughout all its programs so that every student can have a practical appreciation of the challenges of service delivery before they graduate.

2) *Pilot support to local governments' capacity building.* This support targeted curriculum development and review, short term training, refresher courses, and the creation of a critical mass of skilled and knowledgeable personnel in pilot Local Government to meet the longer term education demands of the local governments. Targeted training equipped staff of local governments with skills and knowledge relevant to their service delivery mandates. Some of the specific achievements related to capacity building include:

- More than 60 short term courses tailored to specific needs in service delivery through the different phases of implementation by University staff
- Over 13 courses at Makerere University have been redesigned to include modules relevant to improved service delivery and poverty reduction. Two of such programs received the Makerere University Vice Chancellors Award for Innovation. Demand Driven Curriculum Development: The participatory process of developing / reviewing curricula has prompted both the central and Local Governments to demand a review of existing or introduction of entirely new curricula. Curriculum development and change has meant making curricular relevant to societal needs,
- The creation of a critical mass of skilled employees through provision of professional skills at undergraduate and postgraduate levels. We believe that when this team of middle managers and technical officers return to their respective districts, there will be a significant improvement in the quality

of services delivered by such Local Governments. The critical mass created includes

- One hundred and fourteen (114) undergraduate scholarships in the six target disciplines offered in Makerere thereby adding an average of 14 graduates to each of the eight pilot districts.
- Eighty two (82) fulltime scholarships to graduate staff in the participating local governments at masters' level offered at Makerere University and the partnering institutions giving a boost of an average of about 10 post-graduates to each of the pilot districts.
- Staff from these local governments are continually taking skills building programs regularly offered at the Uganda Management Institute, a collaborating institution.
- Working with other local government programs such as the Local Government Development Program (LGDP), and the Uganda Local Governments Association (ULGA) to provide professionals with deeper understanding of social change and a broader set of skills necessary to do their work
- Establishment of Communities of Practice: The project has supported periodic visits of the pilot Local Governments to each other to share and learn examples of good practices with respect to service delivery. Six such exchange visits have been supported and indeed a number of good practices have been identified which are being adopted in the pilot local governments.

3) *Policy Research:* The program set out to conduct research on decentralization with a view to identify challenges and work out possible solutions to decentralized service delivery. The research findings would inform policy on decentralized services. Support has been extended to 116 masters' level students to undertake research in different areas.

- While the research findings have contributed or are contributing to the partial fulfilment of the requirements for a masters' degree, most of work have identified a number of issues that can be translated into policy provisions or curriculum review. All the one hundred and sixteen (116) research scholarships have been offered to the participating institutions and some of the work has interested Government and in particular the Ministries of Finance, Planning and Economic Development and Education and Sports. The Ministry of Finance has expressed interest in supporting research on "*Micro Finance Support System Gender and Development in Uganda*" in

its bid to strengthen microfinance institutions in the country. Ministry of Education & Sports has also expressed interest in pursuing further the findings and recommendations on a study on “*Implication of increased student enrolment on academic staff performance: A study of selected Universities*”.

- University staff have also been supported to undertake research that will influence policy in agriculture, health and governance. The program has enhanced the ability of university staff to critique government policies based on empirical evidence. Hence we have such ongoing research by Faculty of Technology in Arua, Jinja and Sironko districts. Similar initiatives have been undertaken at the request of the Ministries of Health, Local Government, Water Lands and Environment and Finance, planning and Economic Development. One very vital research that is being supported to date is the determination of DDT<sup>9</sup> residues both the food chain and in humans in Kanungu district in Uganda where DDT was used to control malaria in 1959/1960. The study findings have further informed Government policy on use of DDT to eradicate Malaria from Uganda. Abstracts of all the research work supported by [I@Mak.com](mailto:I@Mak.com) are being compiled and will soon be published on the Makerere University Website.
- The support to research work by staff has also led to development of appropriate technologies in building construction materials and strengthening of small scale entrepreneurs / artisans potential for small scale industries in economic development. Appropriate technologies developed by the Faculty of Technology include low cost housing using interlocking stabilized soil block (ISSB), rainwater harvesting tanks using the ISSB and solar water heating made out of mild steel and waste car glass for use in schools and homes. These technologies have contributed to the girl child retention in primary schools and have been developed as the prototype for UPE school construction, shell global is promoting this energy saving initiative and it has been adopted to improve the housing situation of the upland rice growing project
- Related to the partial scholarships are the 20 PhDs which have been offered to Makerere University staff. These fellow ships will boost the staff strength and contribute to service delivery through the dissemination of researches results.
- More support has been extended to research in partnering institutions and the research findings will also go along way in further informing policy

■ **Physical Planning:**

In Uganda, like in many other countries land use is not properly planned. As a result urban centres have come up without proper plans and their future development has met with incredible challenges.

The program has supported an initiative to use a University Department of Geography to demonstrate the benefits of a planned urban centre by carrying developing structure plans for four (4) rural urban centres including the capital of a Local Government. These are:

- a) Rukungiri Town, the capital of Rukungiri district
- b) Buyanja Township in Rukungiri district
- c) Namwendwa Township in Kamuli district
- d) Kisozi Township in Kamuli district.

■ **Pedagogical Skills for Lectures in Tertiary Level Institutions:**

The project has supported an initiative, which is intended to provide skills for teaching/lecturing to all those staff that have not received training in pedagogy. While this was initially targeting Makerere University staff, the initiative has been found to be desirable in all Universities and other tertiary Institutions. One of the recommendations of the findings under this initiative is that the promotion of a lecturer should be based on whether s/he has taken pedagogical skills training. This will provide an opportunity to the very many lectures in institutions of higher learning to acquire professional skills that will enable the staff to teach better and therefore improve the overall quality of teaching in tertiary institutions. This will in turn lead to improvement in service delivery while the graduates will be better equipped at the end of the training. To date over 300 staff at Makerere and other tertiary institutions have been trained and the process is going on to train more in all the tertiary institutions and especially the universities.

**6. Lessons Learnt**

**i. Environment for innovativeness**

Institutional support on an open competitive basis creates an incentive for innovation.

**ii. Development of Partnerships**

Effective implementation and sustainability of the decentralization program requires a collaborative effort between Government, donors, higher institutions of learning, the civil society, local governments, and vocational training institutions. None of these institutions has the capacity to plan for and develop capacities to support an effective decentralization program without collaborating with others. Tertiary institutions are key strategic partners in providing more sustainable and appropriate capacity building interventions for Government programs than the periodic short term external technical assistance that had characterized capacity building programs.

### iii. Linkages between Local Governments and Higher Education Institutions

“We had built walls around ourselves, and as a result, we plagued our minds with institutional barriers”

**Name withheld**

“We are too conservative about our PhDs and Masters, yet the people on the ground are equally experienced and knowledgeable in their own right. We should have had somebody from LGDP Secretariat or the district on the team right from the planning level”

**Name withheld**

*Source: Mid term review report by independent consultants*

The program has opened collaborations between universities and local governments. Staff and students within the University who had confined themselves within the University and its immediate environs have been exposed to the realities and the requirements of service delivery. In so doing the program has increased the relevance of Makerere University and other higher education institutions to societal needs. The program opened up a spectrum of opportunities and potential for the university in addressing community specific needs in terms of research, short term training and curriculum development. The linkages created directly stemmed from a re-evaluation of the relevance of programs offered by the university and indeed questioning its mandate for societal development.

#### iv. **I@Mak.com model a promising new approach to training.**

The I@Mak.com model which builds on Government key / priority programs promises hope for an alternative to the traditional training. Indeed a report issued by the Operations Evaluation Department of the World Bank April 2005 (page 32 Box 4.7) recognises the I@Mak.com project as a Promising new approach to training.

#### v. **Professional/Career Support as part of Capacity Building**

As mentioned earlier, most Capacity Building programs have been offering short term skills oriented training. The project's approach was also to promote career growth by supporting long term programs such as degree courses at all levels. It was believed this would act as an incentive to retain staff in local governments. Indeed early results have shown that most of those staff that would have been laid off in the recent restructuring exercise have instead been promoted because of their newly acquired skills after graduating with their degrees.

Because of the I@Mak.com experience and partnerships with Makerere, the Ministry of Local Government has finally incorporated long term / professional training in their capacity building policy.

#### vi. **Cost effectiveness:**

The project has demonstrated that long-term programs are much cheaper to run than short one-week programs. Additionally they are more effective and achieve a longer term impact in terms of capacity for service delivery.

#### vii. **Commitment**

The participatory approach in the design of the project with active involvement of the Makerere University, government and donors has given the project a strong foundation with high level commitment from the stakeholders. The transparent competitive access to grants assures all potential beneficiaries of a fair evaluation. Continuous self evaluation of the committee to assess their performance against given guidelines has led to enriched guidelines that are responsive to beneficiaries wishes and observations.

#### viii. **Field Attachments should be part of every Undergraduate / Masters Program.**

Internships help to take universities out to the communities but they also help to equip university students with experience and challenges associated with service delivery. Field attachments also help to expose university students to potential employers and demystify the wrong impressions about certain employers.

## 7. **Potential Challenges to the Implementation of the Program**

### a. **Changes at the National Level**

At the national level there are several political, cultural and social changes that have and continue to impact on the governance structures of the country. While the program was premised on decentralization as a vehicle for service delivery, the current political changes are not favourable to the decentralization policy. Recentralization of some offices undermine the ability of staff trained under the program. Related to one above is the need to sustain the service delivery momentum that has been generated by the program amidst the governance structural changes.

b. The Program has been running in pilot mode, coverage was therefore limited to eight pilot

districts. There have been repeated calls from several local governments to expand the geographical scope of the program and have similar interventions. This demand cannot be met by the Universities alone without the assistance of stakeholders.

- c. As a pilot, the program initially covered five pilot districts, this was extended to eight with the same boundaries but with different governance structures. The number has now increased to more than 12.
- d. **Poor Marketing Strategy:** The successes of the project are not widely marketed. The absence of a communication strategy has limited the dissemination of the project achievements. Not many an institution outside Uganda knows about the success of this model of capacity building that is a partnership involving central government, local higher education institutions, sub-national governments and development partners, aimed at supporting the poverty eradication strategy program of a country.
- e. **Weak Monitoring and Evaluation Strategy:** We had an ambitious monitoring strategy that has ended up being rather difficult to implement. The entire project monitoring and evaluation was based on an external consultancy without deliberate in-house monitoring capacity. We belatedly employed our own in-house consultant for provide day to day monitoring services but even then this did not stay long because of market demand. The consultancy firm we deployed never measured to the assignment and we had to terminate their services. We therefore had to repackage the entire M&E strategy to focus mostly on documenting lessons learnt and assessing the long-term outcomes and possible impact of the assignment based on project progress reports and limited surveys.

## 8. Prospects for the Future:

The program will build on the progress made and the lessons learnt over the previous years in particular the program will complete the activities that have been undertaken over the last three years. The program will continue to strengthen the ability of Ugandan universities to respond to human capacity and research needs of service delivery towards poverty reduction within Uganda. In particular Government of Uganda recently revised the Poverty Eradication Action Plan (PEAP) which is its poverty reduction strategy policy document and came up with priority research themes to support its poverty eradication strategy. A “research guide supporting the eradication of poverty in Uganda, November 2004” has consequently been issued and these are the areas that we have been targeting and plan to continue with in our research programs. The priority research themes in the guide are pegged to the PEAP Goals. This is a national challenge and all higher education institutions in Uganda have a task to ensure that we provide our expertise to provide government with evidence / knowledge to inform its future policy strategies on poverty eradication. The table below gives a summary of proposed way forward with estimated costs over the next three years.



Activity	Target	Total Cost (US \$)
<b><i>Strengthening Internship Program.</i></b>	10000 students	6,240,500
A total of 10,000 students across all units of Makerere University will be supported to do internship by 2009 in a phased manner. With 5000 students in first year, additional 2000 in second year and additional 3000 in the third year of project implementation. Activities to be undertaken include mainstreaming field attachment guidelines in the university curricula, pre-planning, and training of field supervisors, actual field attachments and supervision.		
<b>Scholarships to local government staff</b>		
<b><i>Undergraduate scholarships</i></b>		
The program will support 5 undergraduate students from each of the 40 districts to be selected on the basis of identified human resource needs in collaboration with Uganda Local Governments Association (ULGA). Special priority will be given to the newly created districts that currently have inadequate personnel in terms of both the numbers and skills. The costs will cover tuition fees, stipend, and institutional/University administrative costs. An undergraduate program costs an average of US\$ 2666 per year and most of the undergraduate programs are three years.	200 students	1,600,000
<b><i>Masters scholarships</i></b>		
The program will support 5 Masters students from each of the 40 districts. The costs will cover tuition fees, stipend, research costs, and institutional/University administrative costs. A masters program costs an average of US\$ 4750 per year per student and lasts an average of two years.	200 students	1,900,000
<b>Short Courses/Refresher training</b>		
During the next three years at least 10 new courses will be run in the priority areas with at least 25 participants for each of the courses. The average cost of running a short course of about 5 days, with a 25 participants is US\$ 22000	10 courses, 250 participants	220,000
<b><i>Support for decentralised research fund for Masters students</i></b>		
The program will support a total of 232 students (double the current number of 116 students) already doing their masters program in the collaborating institutions of Makerere, Nkumba, Mukono, Nkozi, IUIU, UMI and MUST to conduct research in any of the national priority research agenda.	232 students	812,000
<b><i>Support for decentralised research fund for PhD</i></b>		
The program will support 10 PhD students to pursue PhD program at Makerere University and 4 PhD students to pursue their program at each of the five partnering institutions of Nkumba, Mukono, Nkozi, Islamic University in Uganda (IUIU) and MUST. The program will also cater for the sandwich program, where applicable.	30 students	1,050,000
<b>Support for curriculum development</b>		
With the program being extended to all the university units. It is envisaged that new curricula will be developed and existing ones reviewed to suit the ever changing environment. A total of about 4 curricula in each of the major six priority areas will be developed/ or reviewed. Development of a new curricula cost about US\$23,000	24 curricula	552,000
<b>Total</b>		<b>US \$ 12,384,400</b>

Annex 1


Some of the Projects Supported by *I@mak.com* in responding to service delivery challenges and improving community livelihoods while at the same time establishing sustainability mechanisms through established institutional processes such as Curriculum development have been


**1. Enhancing the Role of Makerere University in Technology Generation and Dissemination and the Establishment of Farmer Field Schools (FFS)** by the Department of Crop Science Faculty of Agriculture *A report of a pilot of four districts in eastern Uganda*


**Outputs**


- 14 FFS established in the 4 districts of Iganga, Palisa, Kumi and Kaberamaido.
- 367 farmers directly trained in IPM skills using the FFS approach.
- 24 agriculture officers trained in dissemination and IPM skills.
- 3 agriculture officers used the FFS setting to obtain MScs.
- 4 p publications accrued from the project.
- Third year students were exposed to the reality of the farming communities through their visits to the FFS.
- Linkages created/strengthened between MU and i) farmers, ii) NARO, iii) NAADS, iv) MAAIF, v) Districts, and vi) other stakeholders and development partners.

Pilot Study: pioneer FFS









<b>GENDER TRAINING &amp; SKILLS DEVELOPMENT (GTSD) PROJECT FOR DECENTRALISATION IN UGANDA</b> Department of Women and Gender Studies		
<b>Outputs at Feasibility</b>	<b>Outputs at Pilot</b>	<b>Outputs at Full Implementation</b>
<ul style="list-style-type: none"> <li>✓ Feasibility study report</li> <li>✓ Identification of key persons in implementation of the project</li> <li>✓ Identification of skills gaps and requirements in Mubende and Kumi</li> </ul>	<ul style="list-style-type: none"> <li>✓ Stakeholder participation in defining the way forward for full implementation of the GTSD Project.</li> <li>✓ Identification of more potential actors in the implementation</li> <li>✓ GTSD draft training manual</li> <li>✓ Pilot phase report including selection criteria</li> </ul>	<ul style="list-style-type: none"> <li>✓ Locally developed GTSD training manual for local governments</li> <li>✓ Application of acquired skills in mainstreaming gender in policies, plans and budgets by Kumi local Government</li> <li>✓ Foundation for undertaking district planning and budgeting in a gender responsive manner developed.</li> <li>✓ Gender Audit report reflecting national status on gender capacities of various local governments</li> </ul>

## 2 Enhancing horticultural crops production in decentralized districts through training in propagation techniques and proper cultural practices

### • **Innovations**

This is the first course of its nature that aims at equipping extension workers with additional skills and knowledge in horticultural crops production techniques which would put them in better position of carrying out extension activities.

- The course also introduced the participants to new crops like vanilla and jack fruit which have hitherto not been covered in the Makerere curriculum.
- The course was timely because there are many changes in the Agriculture sector like PMA, NAADS which demand more from the extension officers. Therefore targeting training of the extension personnel who have

Knowledge gaps particularly in dealing with small farm horticultural crops enterprises is a new approach to solving the problem.

- Information for better production and handling techniques of fruits and vegetables were prepared in the form of handouts and leaflets and distributed to extension staff.

### **Sustainability**

For sustainability of this program the following is proposed:

- The curriculum will be handed over to the Department of Crop Science for further review and presentation to the Faculty board

for approval as an annual certificate training course.

- Full implementation has covered 12 districts and 36 sub-counties I @ mak.com could extend the funding of this project to cover more sub-counties/ districts.
- The course can be offered to all those districts/sub-counties not covered during full implementation if they can meet the costs.
- Production of horticulture handbook



## Establishment of a Decentralization Information Database & Provision of DDS to Local Government Personnel By University Library

Pilot Phase	Implementation, Results & Achievements	Sustainability Considerations
<ul style="list-style-type: none"> <li>✓ <b>Objective:</b> Produce Decentralization database</li> <li>✓ <b>Activities:</b> Design data sheets, train RA, visit info. sources, collect, edit, purchase equipment, enter, dev. CD-ROM and carry out workshops</li> <li>✓ <b>Outputs:</b> UGDEC on CD-ROM &amp; Print with 261 records</li> </ul>	<p><b>Objectives:</b> Put in place a DID on Uganda &amp; Establish "Document Delivery Services to LGP". Objectives met with high degree of satisfaction.</p> <p><b>Outputs:</b> - UGDEC of 644 records on CD-ROM, Print and Online, <b>accessed at: <a href="http://192.168.0.89/wwwiris/wwwiris.htm">http://192.168.0.89/wwwiris/wwwiris.htm</a></b></p> <ul style="list-style-type: none"> <li>✓ UGDEC installed in 3 districts, and 56 CD-ROMs produced</li> <li>Project Brochures &amp; UGDEC user manual produced</li> <li>✓ Nucleus for Information Resources Centre at Mak created</li> <li>✓ Nucleus of Proposed MIRS DR Centre created</li> </ul>	<ul style="list-style-type: none"> <li>✓ Staff at district trained to handle DDS</li> <li>✓ Districts willingness to create budget line for DDS</li> <li>✓ Existence of district links to other project</li> <li>✓ Some districts now connected to Internet &amp; DDS possible</li> </ul>

**Masters Research:**

Benefits and Health Risks associated with Milk and Cattle Raised in Urban and Peri-Urban Areas of Kampala City

**Research Question**

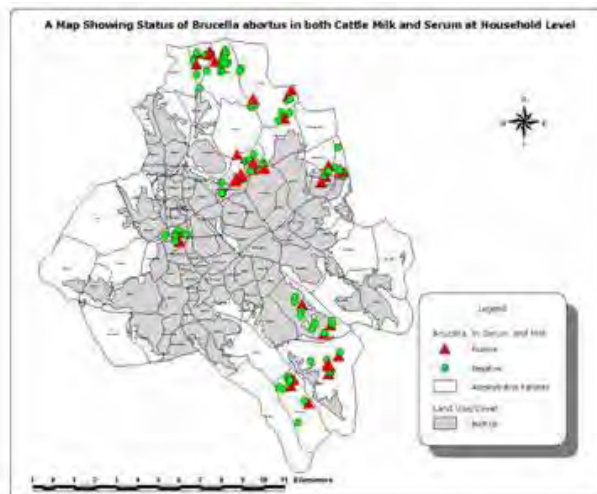
- What is the prevalence of zoonotic health hazards (Brucellosis, E. coli 0157:H7)
- Do antimicrobial residues exist in milk consumed at farm level in Kampala?
- What are these antimicrobial drugs?

**Methodology**

1. Qualitative; Focus group discussions
2. Quantitative:-
  - Structured questionnaires
  - Milk Ring Test (MRT) for Brucella abortus
  - Rapid Agglutination Test for Brucella abortus in Serum
  - Slow Agglutination Test (SAT) for Brucella abortus in Serum
  - Charm Farm- 960 for 5 common families of Antimicrobials ( $\beta$ -lactams, Tetracycline, Amino glycosides, Macrorides, Sulphonamides)
  - Charm-ROSA Test for  $\beta$ -lactams
  - Culture and isolation of E.Coli 0157:H7

**Conclusions**

- Consumers of cattle products like milk at farm level in Kampala district are at a potential risk of exposure to antimicrobials residues as revealed by this study.
- High brucella sero-prevalence in cattle serum and milk indicates that brucellosis could be a significant problem in the human population
- Milk plays a key role in the transmission of zoonoses and therefore may be the most practical level for intervention to curb human infection.



**Practical Training In Integrated Commercial Fish Farming**

Specific Objective		Outputs
<ul style="list-style-type: none"> <li>✓ To initiate and strengthen the delivery of demand driven short courses in fish farming, planning and management to meet urgent needs at the districts</li> <li>✓ To promote interaction and information exchange among staff of Makerere University, district planners, civic leaders and entrepreneurs in fish farming</li> </ul>		<ol style="list-style-type: none"> <li>1. Status of fish farming in the districts established</li> <li>2. Participant's constraints and training requirements assessed</li> <li>3. Formation of Masaba Fish Farmers Association - forum</li> <li>4. Two short course curricula</li> <li>5. Filled key technology gaps in fish farming and farmers' skills enhanced</li> <li>6. Identified areas for Improvement of the BFA</li> </ol>

# RUFORUM-MAKERERE UNIVERSITY RESEARCH AND TRAINING SUPPORT PROGRAMME

RUFORUM Secretariat, Plot 151 Garden Hill, Makerere University Main Campus, PO Box 7062, Kampala, Uganda; Tel 256 41 535939; Fax 256 41 534153; Email [secretariat@ruforum.org](mailto:secretariat@ruforum.org); website [www.ruforum.org](http://www.ruforum.org)

By  
Prof. Adipala Ekwamu  
Ruforum Coordinator

## EXECUTIVE SUMMARY

The Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) is an umbrella organisation of 12 universities in East and Southern Africa, Makerere University being one of them. It originated from the Rockefeller Foundation's supported universities'-based programme *Forum on Agricultural Resource Husbandry (FORUM)* formed in 1991 purposely to provide peer support to faculties of agriculture and related sciences in research and training of graduate students (Masters level predominantly), building staff and students professional competencies, providing infrastructure support and promoting networking among the member universities and with other actors. From 1992-2003, the Rockefeller Foundation invested US\$14 m in this programme, of which about US\$5 m was spent at Makerere University. This resulted in the training of 102 Masters Students at Makerere University (out of 250), 14 of whom are now Faculty staff at Makerere University and several are playing leadership roles in other sectors especially in the Non-Governmental Organisations and the National Agricultural Research and Extension Systems, which were the targeted areas of the programme. The Programme together with other actors was able to revitalize graduate training programmes in the Faculty of Agriculture, and today, the faculty is a recognised leader in the agricultural field in the region. Publication in peer reviewed international journals was a key thrust of the programme, and 198 papers from this programme have so far been published in international journals, 69 in regional journals and 84 in national journals, and several as Proceeding and Occasional papers.

FORUM evolved into RUFORUM in January 2004, and already Makerere University through the RUFORUM Competitive Grant Scheme has accessed US\$700,000. To build synergy and minimize competition among its member universities RUFORUM is promoting *Networks of Specialisation* and assigning, based on existing capacities and competencies, lead roles to different universities. Makerere University will lead/partner in the areas of Rural Development, Natural Resource Management and Crop Improvement, Biotechnology and Seed Systems. Efforts are already being made to integrate the Faculties of Forestry and Natural Resource Management, and Veterinary Medicine into the

RUFORUM activities. Beginning January 2007, RUFORUM will also mount regional-based PhD programmes (course work & research) in specific gap areas, the first three being in Agricultural and Natural Resource Economics and Fisheries & Aquaculture (to be hosted by University of Malawi), and Dryland Farming (to be hosted by the University of Nairobi). Jomo Kenyatta University of Agriculture & Technology is coordinating training (Masters) of Research Methodology Specialists (Biometry, Econometrics and Biostatistics). These programmes will pool existing human resources from the different member universities and elsewhere. These efforts are intended to contribute to building quality human resource to support national agricultural innovation systems and poverty reduction efforts of the regional governments and are based on value-addition partnerships. Currently RUFORUM is funded by the Regional Governments, Rockefeller Foundation and USAID, and invites other donors to join in, whether at bilateral level or regional level. *RUFORUM represents a major paradigm shift: training quality graduates for Africa within Africa.*

## 1.0 BACKGROUND

The Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) is a member based organisation owned by 12 universities in East and Southern Africa and primarily formed to strengthen and promote the roles of universities in agricultural development and to anchor universities within the broader national agricultural innovation systems. It is a response by the participating universities to contribute more effectively to attainment of Millennium Development Goals and Poverty Reduction Support Programme strategies of the member countries. It evolved from the Rockefeller Foundation's programme on Agricultural Resource Husbandry (FORUM), which operated for 12 years (1992-2003) in Kenya, Malawi, Mozambique, Uganda and Zimbabwe. The current member universities of RUFORUM include (**Kenya**- Egerton University, Jomo Kenyatta University of Agriculture and Technology, Kenyatta University, Moi University and University of Nairobi; **Malawi**- University of Malawi; **Mozambique**- Eduardo Mondlane University; **Tanzania**- Sokoine University of Agriculture and Technology;

**Uganda-** Makerere University; **Zambia-** University of Zambia; and **Zimbabwe-** Africa University and the University of Zimbabwe. RUFORUM has its Secretariat at Makerere University, but operates as an independent unit.

## 1.1 RUFORUM'S VISION AND MISSION

### Vision

*RUFORUM* sees vibrant agricultural innovation systems with fully integrated universities who play a leading role in nurturing the systems through high-performing agricultural science graduates who are innovative and responsive to changing demands

### Mission

*RUFORUM's* Mission is to foster innovativeness and adaptive capacity of universities engaged in agricultural and rural development to develop and sustain high quality in training, innovative and impact oriented research, and collaboration

## 1.2 RUFORUM'S ROLE AND CORE FUNCTIONS

RUFORUM's mode of operation as a regional umbrella body which targets five strategic goals (Figs. 1&2) determines that RUFORUM plays the following roles:

- RUFORUM will be an **INNOVATOR** that catalyses change within universities in terms of training, research and related management aspects
- RUFORUM will be a **CATALYST** and **COORDINATOR** for partnerships and collaboration within the countries and across the region
- RUFORUM will be an **INFORMATION & KNOWLEDGEBROKER**
- RUFORUM will be a **REPRESENTOR** and **ADVOCATE** of universities and their stakeholders

All the four roles are based on the value-addition at regional level to on-going national universities' efforts (such as the Makerere University's Strategic Plan and response to the Uganda's Poverty Eradication Action Plan)). Fundamental to RUFORUM success is a *well focused, prioritised, and efficiently implemented research and outreach agenda*. RUFORUM will therefore work with participating universities and their partners to implement swiftly and effectively a new research and outreach paradigm which includes:

- **The universities mainstreamed within the National Agricultural Research and Extension Systems (NARES):** farmers want answers to problems and an efficient and effective process for reaching those answers. Universities and their partners will need to become *development* as well as *research* agencies.

- **Substantial farmer involvement in research:** the universities and their partners will need to provide significant leadership and expertise in capitalising on opportunities to expand, improve, and institutionalise the start already made in using participatory methods, and in prioritising outreach and scaling up issues.
- **Innovation to be welcomed:** new ideas, new people, and partnerships with new institutions are explicitly encouraged by RUFORUM. This includes thorough use of the scientific literature, web-based sources or the private sector, and especially networking between kindred interests.
- **A research agenda which moves beyond technology:** the problems faced by farmers are not simply those of low productivity, but of access to markets for inputs and outputs, and of constraints (such as HIV/AIDS and gender inequalities) which cannot be addressed through technological change alone.
- **Integrating cross-cutting issues:** there are several cross-cutting issues which need to be properly incorporated as RUFORUM member universities and their partners implement the strategic thrusts. These include, but are not limited to;
  - a) Adding value and commercialisation: a major emphasis in almost all national development strategies has to help the poor 'add value' to the commodities which they have for sale.
  - b) HIV/AIDS: the pandemic adds a particular challenge to agricultural development in the region. RUFORUM plans to link public health and agriculture as an essential crosscutting issue to run through all strategic themes.

**Fig.1: Conceptual framework showing the desired outcomes of RUFORUM Strategic Goals at individual faculty level**

Strategic Goal (Thrust)	RUFORUM Faculty*			
	CSci	AnSci	AEcon	NRM
<b>G1: Responsive training</b>	Interdisciplinary perspectives			
	Relevant expertise			
<b>G2: Rationalized facilities</b>	Shared facilities within Faculty			
	Strategic sharing with others			
<b>G3: Innovative structures</b>	University & faculty policies			
	Departmental and staff options			
<b>G4: Impact-oriented research</b>	Partnerships with beneficiaries			
	Farmers	private	public	
<b>G5: Regional platform</b>	Develop consensus for advocacy			

\*Possible departments, CSci= Crop Science; AnSci= Animal Science; AEcon= Agricultural Economics; and, NRM= Natural Resource Management

Fig.2: Conceptual framework depicting activities and desired outcomes of the RUFORUM strategic goals at stakeholder, university and regional levels

Strategic Goal (Thrust)	Stakeholders	RU member	RUFORUM
G1: Responsive training	Graduates employed by R4D interests	Multi-talented graduates trained	Curriculum improved & research supported
G2: Rationalized facilities	University facilities available to stakeholders	Facilities shared between departments	Networks of specialization developed
G3: Innovative structures	University sensitive to community needs	Faculties responsive to development needs	Management lessons shared among members
G4: Impact-oriented research	University products provide solutions	Research translated into products	Improved research methods exchanged
G5: Regional platform	Community expresses views & needs	Faculty develops responsible position	Debate fostered & positions consolidated and networking promoted



## 2.0 ACHIEVEMENTS AND IMPACT

### 2.1. FORUM PARTNERSHIP PROGRAMME AT MAKERERE UNIVERSITY (1992-2003)

To support research, training and outreach activities of universities in the east and southern Africa region, the Rockefeller Foundation in 1991 launched a programme (Forum on Agricultural Resource Husbandry - FORUM) to stabilise faculties of agriculture and other related faculties in Kenya, Malawi, Mozambique, Uganda, and Zimbabwe by providing resources, mission and peer support, leading to knowledge contributing to improved lives of smallholder farmers. This was accomplished through a competitive grants programme to strengthen, encourage and support training of students in agriculture and related sciences at the M.Sc/M.Phil level. The thrust was to create high quality graduate training programmes directly associated with research designed to address agricultural problems concerned with improving the productivity, profitability and sustainability of the resources available to farmers.

In built within the competitive grant programme was overall institutional development in terms of infrastructural development, strengthening staff competence and facilitation of a functional collaborative linkages with agencies outside the university (e.g., agricultural research institutes, Non-Governmental Organisations (NGOs), private sector, etc.). The research and training programmes were as much as possible designed to involve interaction with farmers and utilise interdisciplinary, participatory and systems-level approaches (see Fig. 3). In-country and biennial meetings were held at which researchers and students presented results and often this included some non-FORUM associated invitees. Other initiatives were implemented to improve the quality of graduate training in terms of curriculum development; equipping research facilities (see Fig. 4), providing vehicles, computers, software and other equipment and supplies, facilitating information access, remedial biometrics training, etc. Peer-reviewed scientific publication of papers was explicitly expected and supported. The programme also supported networking through regular in-country, regional and international meetings. FORUM also provided support for scientific publications (eg African Crop Science Journal), networking and disseminated research outputs through the FORUM News (now RUFORUMNEWS) and FORUM Working Documents Series- to reach a wider audience.



*Fig. 3: The former Minister of Agriculture, Animal Industry and Fisheries, Dr. Kisamba-Mugerwa (foreground), Former Vice Chancellor of Makerere University, Prof. John Ssebuwufu (stripped blue shirt), local government officials and others at a FORUM funded student's ground nut field in Kumi, eastern Uganda*



*Fig. 4: FORUM and other programmes facilitated establishment of a modern Biotechnology laboratory at Makerere University that is now being used to build capacity for the ASARECA and SADC regions. Other International scholars are also using it as a reference laboratory*

To support these activities, FORUM provided a total of \$14,086,972 in the form of 314 grants to the different universities: **Research**, amounting to \$10,372,016 (i.e. \$2.5m for graduate scholarships and the rest research, infrastructural support and staff and student development); **Non-research or other initiatives**, amounting to \$3,714,956 for supporting other activities, the benefits of which were generally not confined to any specific country or university. Such activities included; biennial FORUM Regional meetings, country meetings and student retreats ((\$1,060,000); curriculum development (\$637,000); information access (\$398,000); attendance of professional meetings and publications (\$253,000). Of the \$14m, a total of \$5m was spent at Makerere University, resulting in the training of 102 Masters and 3 PhD students (see Fig. 5).

Through this support the programme was able to resurrect graduate training, and today, the graduate programmes in the various participating faculties are functional and are attracting international scholars and students. As of 2003, there were 351 journal publications (198 in international, 69 in regional and 84 in national journals) from FORUM research, an indication of the quality achieved and close to 250 M.Sc. students have graduated and are working in different sectors- public and private; 28 are faculty staff (14 at Makerere University), 62 are working with NARIs and CGIARs, several former FORUM students have advanced their academic careers and already 18 have completed PhD while 30 are undertaking PhD studies. Already the programme has developed and disseminated several technologies which are enhancing productivity of smallholder farmers. At Makerere University, the Faculty of Agriculture with support from FORUM responded promptly and has released two high yielding and rust tolerant soybean varieties (Maksoy IN and NAMS0Y IN) in response to the devastating rust epidemic ravaging the east and southern Africa region. The faculty has also developed four high yielding cowpea varieties which have been submitted for national release (See Fig 6).

In some universities, such as Makerere University and Kenyatta University adequate infrastructure has been put in place to venture into new fields such as biotechnology and bio-safety. Research has been invigorated, with faculties working downstream and no longer "ivory towers" (see Fig. 7); the faculties are now able to compete internationally and attract resources. Generally, FORUM has helped to attract and retain staff and stimulated university engagement with communities. Thus, FORUM was able to achieve its goal of stabilising the faculties of agriculture and related faculties in the participating universities and has positioned them to be able to respond more effectively to national demands.



Fig. 6: A farmer in eastern Uganda admires a cowpea variety (MU-93) developed by Makerere University



Fig. 7: RUFORUM/FORUM has facilitated University Researchers and students to work downstream with the target beneficiaries-farmers. Here Prof. Samuel Kyamanywa of the Faculty of Agriculture at Makerere University sharing experiences with farmers on IPM knowledge

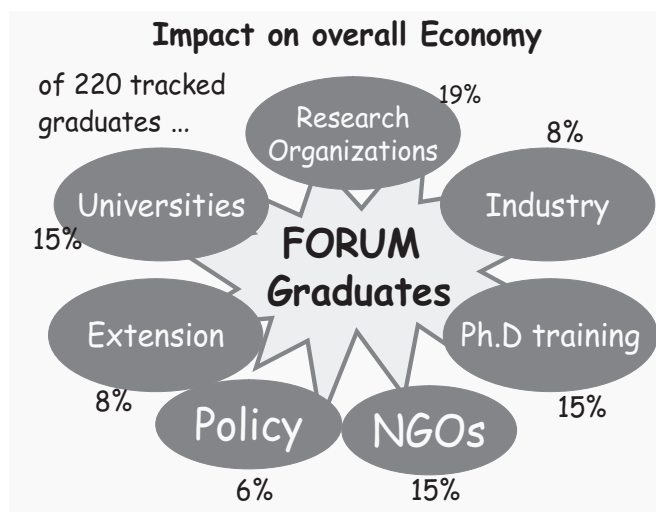


Fig. 5: FORUM students have been absorbed in different sectors in the region. Of the 102 students trained at Makerere University 14 are now Academic staff in the same university.

## 2.2 RUFORUM, 2004 TO DATE

The need to consolidate FORUM's achievement is apparent. It is also critical to ensure that universities' research and training are well integrated into the national innovation systems. With the increasing demands to transform the continent and yet dwindling resource base, there is need for more innovative approaches which capitalise on existing capacities, and promote more efficient use of the limited resources. A regional approach that capitalises on individual universities capacities and competencies while building synergy to produce regional public goods (quality graduate students, research products and processes) is thus desirable. In January 2004, the Vice-Chancellors of the then 10 member universities of FORUM transformed the programme into a member-based organisation (RUFORUM) and set up an independent secretariat housed at Makerere University. Makerere University was chosen to house the secretariat partly because of the positive reforms taking place in the university such as under [I@mak.com](mailto:I@mak.com), credibility in hosting regional programmes and transparent and speedy financial management system.

The Network has operated now for 2 years. Specifically for Makerere University;

- a) Eleven grants (totaling \$700,000) have been awarded to the university to facilitate research and training of 25 M.SC students and support staff and infrastructure development. Examples:
  - One of the grants (Dr. Phinehas Tukamuhabwa's) is supporting university-private sector partnership to multiply the basic seed, and work with farmer groups to grow soybean for the oil industry. It involves training graduate students in the entire value chain, from basic research (breeding, agronomy, etc), seed production (including contract farming), processing to marketing.
  - Another grant (Dr. Moses Tenywa's) supports working with the local government in Bugiri District to develop decision support tools to facilitate planning and decision making in the agricultural and health sectors in the district
    - Four grants (Dr. P. Okori, Dr. S. Mukasa, Dr. G. Tusiime and Dr. P.R Rubaihayo's) are supporting work on marker-assisted breeding to improve maize protein and starch quality, resistance to sweet potato virus disease (SPVD), resistance to anthracnose disease in common beans and resistance to virus diseases in cowpeas, respectively. These grants are training students from Uganda and Zimbabwe, and have enabled leveraging (joint funding) additional funds from the BIO-EARN programme (SIDA/SAREC funded), piloting

cross-country student exchange training programmes, and building Makerere University as a lead centre in Plant Breeding and Biotechnology

- b) RUFORUM is also supporting up-scaling of its previous FORUM pilot project on strengthening Personal Mastery/Soft Skills capacity and competence of Makerere University staff. Twenty six staff members (WIN 26) were trained under FORUM, and 33 are being trained under RUFORUM. We also facilitated 3-day training for the university top management. The WIN 26 group is already facilitating change process nationally and internationally, including to leading organisations such as Forum for Research in Africa (FARA), Consultative Group on International Agricultural Research (CGIARs), National Agricultural Research Organisation (NARO), etc and are involved in scaling out this competence enhancement at the University of Zimbabwe.
- c) RUFORUM is working with Makerere University and the other 11 universities to promote Networks of Specialisation rather than Centres of Excellence. This is intended to build synergy and minimize competition. Under this arrangement Makerere University will partner with other universities to provide leadership in research and graduate training in the following areas: Rural Development, Natural Resource Management, and Crop Improvement, Biotechnology and Seed Systems. Makerere University's Food Science and Technology Department is also being linked to Egerton University, Jomo Kenyatta University and Jomo Kenyatta University of Agriculture and Technology to develop programmes that link agriculture and public health. Among others, these Networks will be used to provide regional – based graduate training PhD programmes (course and research) in key gap areas.
- d) The Governments in the region have urged universities to develop capacity to support strengthening farmer support organisations. RUFORUM is currently working with Makerere University (Uganda), Moi University (Kenya) and Sokoine University (Tanzania) to pilot an action-research project to develop tools, approaches and methodologies for developing such capacity in the region. It is a challenging problem but it helps universities to engage and learn from communities.

## 2.3 Synergy/Linkages with other programmes

Fundamental to the successes highlighted above has been the joint effort and linkages with other on-going activities particularly, Integrated Pest Management Collaborative Research Support Programme (IPM/CRSP), Innovations at Makerere Community ([I@mak.com](mailto:I@mak.com)), the Norwegian Agency for Development Co-operation (NORAD) and SIDA/SAREC support to the Faculty of Agriculture at Makerere University. We also linked with the then Danida supported Danish Institute of Seed Pathology for Developing Countries, to handle seed quality aspects related to soybean, cowpea and rice seed. The National Agricultural Research Organisation (NARO) hosted several of the on-station trials and provided technical back stopping in the Farmer Field Schools we ran to up-scale the technology dissemination. The National Agricultural Advisory Services (NAADS) facilitated field attachments of students and funded workshops to share experiences and lessons. Farmer groups also provided input in terms of knowledge, participation and access to their fields.

## 3. 0 LESSONS AND CHALLENGES

It takes time to achieve impact or reach where we want to go. It took Makerere University nearly 10 years from problem identification, research and delivery to the target stakeholders- Providing quality products to address farmers' livelihood concerns (the new varieties, knowledge and processes). There were also severable pitfalls on the way, including a rush for quick and unrealistic solutions (producing a new variety in one project 3-year lifetime and not adequately integrating other disciplines and players (eg policy makers and change agents). Thus quality research, training and outreach require long-term and sustained investment. It also requires patience and taking risks. Above all it requires believing in people: they can deliver as Makerere University has ably demonstrated. Experiences at Makerere and elsewhere also demonstrate that investing in university-based research is cost-effective: it generates several products at the same time (graduates, technologies, knowledge and processes to guide policy).

Universities are willing to change and work downstream: Makerere University staff and students worked and lived under difficult conditions. We had girl and boy students living in Amuria, Katakwi, Pallisa, Lira, Kasese, etc in not well to do conditions. They became integrated in communities and were considered as daughters and sons of the families and communities they worked in. In Mayige, Iganga, Pallisa, Kumi, Soroti, Katakwi and Kaberamaido they now value the role and contribution of Makerere University in research hence them naming

the cowpea and soybean varieties "Makerere". It is extremely important that development partners recognise this paradigm shift and invest in universities to support development activities. Further the prompt response by Makerere University to develop and release new soybean rust tolerant varieties to address a national crisis (rust outbreak literally wiped out soybean production in the country) is a clear testimony of the responsiveness of universities to national needs. The reform of the National Agricultural Research System in Uganda, to bring on board universities and other actors to the research fold, is a well come development. *Makerere and other university scientists should proactively respond to this opportunity but must remember to develop effective partnerships in their R4D endeavours.*

Ownership of programmes is important. Because FORUM was well integrated in the regional universities and was seen to be responding to "real" needs, it was easy for it to find a new home and driver.. the 12 universities in the region. In this regard, it is important for Makerere University to continue building and marketing its international image, especially in those areas where it has comparative advantage. In the case of RUFORUM, Makerere should direct its efforts to developing joint programmes with other universities, and utilizing its comparative advantage to train for the region. This is important because being a member-based organisation we are confronted with the issue of balancing quality and equity..all members want to benefit from the organisation. As of now, Makerere University has had the largest share of the FORUM/RUFORUM resources.

There were other lessons: Building functional teams is a challenge and realistically, university outreach programmes are weak. Universities therefore need to partner with others with more experience in outreach especially NGOs. Experience of the soybean project in Uganda and a similar one in Zimbabwe also show that we can effectively engage private sector in research for development. The Uganda Private Sector (eg Uganda Investment Authority) has continued to urge for more engagement with universities- we need to respond more proactively to such offers/goodwill.

## 4.0 PRIORITY INVESTMENT AREAS

RUFORUM pleads and urges the regional governments and development partners to increase support for graduate training and research in African Universities. In the case of RUFORUM, these are some of the priority investment areas:

- Support for regional-based PhD training programmes (eg Dryland Farming and Agricultural & Natural Resource Economics)

- Strengthening national research systems through high turnover Masters training of Research Methodology Specialists (in Biometry/Biostatistics/Econometrics)
- Strengthening breeding, biotechnology & seed systems
- Revitalising African traditional crops and fruits, and exploring their roles in contemporary diets and HIV/AIDS mitigation
- Sustainable management and conservation of fragile rangelands and cultivated dry lands through focused research and community-based interventions to enhance the quality of life of the rural poor
- Support for the RUFORUM Competitive Grants Programme to facilitate research and Masters training. This would enable the region to build a pool of human resource for faculty staff development, National Agricultural Research and Extension System and provide a pool of well trained practitioners to support rural development activities.
- Support for joint North-South and South-South research and training programmes, including staff/student exchange.

### ***Acknowledgement***

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*RUFORUM gratefully thanks Makerere University for hosting the Secretariat's offices and actively participating in the Organisation's activities. We also thank the Regional Governments for their blessing and support, and the Rockefeller Foundation and USAID for the funding. We further thank the Organisers of this meeting for inviting RUFORUM to participate.*

# MAKERERE UNIVERSITY ICT MASTERPLAN PHASE II

*Prepared by:*

The Directorate for ICT Support (DICTS)

## 1. Background

The first Makerere University ICT Master Plan (2000 – 2004) was aimed at:

- Enhancement of learning and research through access to online resources;
- User training to ensure optimal utilization of the computerized environment;
- Increasing ease and efficiency of communication for internal and external academic and administrative interaction;
- Establishing the basic minimum infrastructure necessary for computerization, and
- Using this as a platform to shift the university's academic and administrative operations to a computerized environment through the implementation of the major corporate information systems (Library, Academic Management, Financial Management, and Human Resource Management);
- Establishment of a unit of experts who would assure the sustainable availability of all ICT resources through proper information resource management.

A summary of the achievements (indicating current status) during this phase is given in Table A1, Appendix 1.

## 2. Challenges during Phase I

The Challenges experienced over the last phase, some carried over into the current one included: -

- Sustainable management of ICT resources, the operational risks, and likely escalating costs of poor Information Resource Management.
- Limited access to ICT resources, particularly for students, making the impact of ICT insignificant. This is a combination of factors: - power outages, limited space within Faculties for computer facilities, hours of access to computer labs, high student: computer ratio (*esp. in the Arts Faculties*) among others.
- Though a policy requirement, implementation of an ICT training course in all course curriculums is yet to be realized.
- This limits the potential of students to fully exploit the benefits of ICT.
- Full understanding of the process of integrating ICT into the University from Policy level to project implementation. *This has been addressed to a large extent.*

- Failure to map ICT onto the University's vision, mission and strategic objectives, leading to a misalignment of ICT goals with the global objectives of the University. *All current project activities aim at addressing the higher level benefits to the University in line with the strategic plan.*
- Lack of real awareness about the benefits of ICT, and the implications. This has a potential impact on the University prioritization plans.

These together with input from various evaluators have informed and guided the current strategy.

## 3. Strategy and objectives

As opposed to the first phase that aimed at implementing the basic infrastructure and ICT services, the new phase is focused on the impact ICT should have on the core University mandates of research, teaching, learning, outreach and management/administration. The current strategy has the following components: -

- Modernizing instruction and learning and creating increased opportunity for access to quality education through E-learning. *An E-learning policy is the new addition to the revised ICT policy of the University.*
- Achieving the full potential of efficiency gains by ensuring that the University community has got easy access to computer resources that will have a ubiquitous presence on campus by the end of 2009.
- 
- Mitigating the risk of failure in a highly computerized environment
- Human Resource Development for ICT staff.
- Improving the Library ICT infrastructure

## 4. Master plan II components

Table 2 summarizes the various components over a five year planning period (2005 – 2009).

**Table 2: Project component**

Component	Sub-component	Purpose	Funding (USD)
1. Library ICT infrastructure	Equipment ( <i>Computers, security and surveillance systems, tattle tapes</i> ); Retrospective data conversion	Ensuring the availability of user networked computers in the Main Library and all sub-libraries; includes the necessary servers for local mirroring or short-term caching	217,000
2. Information System II ( <i>Addressing the Academic Records, Finance and Library Information Systems</i> )	Student Web Module	Enabling student access to their academic records	354,000
	Acquisition of Internet Application Server Unlimited License required for the ITS system for ARIS, FINIS and HURIS	Enabling access to administrative systems by all staff and students	
	Procurement and installation of a central database server	Imparting skills to all front line users	
	Effective Intranet Implementing the necessary soft support and	server capacity for access to all the university services and databases	
	Backup and disaster recovery	Assuring security, continuity and availability of services	
3 E-Learning 1	Establishing a software development unit	Establishment, equipping and capacity building to respond to the ICT policy on developing in-house applications	
	Capacity Building	Establishing, equipping and training of technical staff for the E-learning Unit	1,010,000
	Multimedia lab	Setting up a facilities for multi-media learning material production and video-conferencing	
	User Training	Equipping academic staff with skills for developing courses and implementing them in an e-learning environment	
	Computer Resources	Equipping the pilot faculties (Science, Technology, Computer Science, Medicine, Women and Gender) with sufficient net-worked computers to implement E-learning	

4. MakNET II	Extension of Optical Fibre network backbone Extending	the campus backbones to all buildings, including halls of residence	1,800,000
	Wireless hotspots/hotzones	Providing access to locations where cabling is not cost effective (particularly student hostels/halls of residence)	
	Local Area networks and Computer labs in various Faculties	Ensuring that all academic and administrative buildings, and to a limited extent halls of residence have local area networks with wired and/or wireless access.	
5. Student computing resources	Computer Resources Equipping existing space in various faculties as well as the general purpose computer labs with networked	computers to enable access by students to online resources for research and e-learning	944,000
6. Capacity building for ICT staff	PhD and other levels of academic training for ICT staff	Equip staff with effective Information Resource Management skills.	608,000
7. Internet access	Procurement of a VSAT and bandwidth	Access to cheaper Internet	bandwidth

through consortia approaches.  
488,000

## 5. Funding

A number of development partners have committed funds to different components of the Master plan, mainly focusing on the capital cost. The university and the Government have been and continue to meet all recurrent costs and taxes. The table 3 below details the funding sources.

**Table 3: Funding sources**

Source	Amount (USD)	Focus
Sida/SAREC	3,220,000	Local Area Networks in Various Faculties
		Fiber backbone (Connectivity for Student residences and academic units)
		Student computing and training resources
		ICT staff training
NORAD	1,073,000	E-learning infrastructure (student computer labs)
		Information Systems
Carnegie Corporation	640,000	E-learning infrastructure (student computer labs)
		Staff training
IDRC	242,000	Software development unit/incubator
Partnership for higher education in Africa	423,000	Internet Bandwidth
SPIDER(Sweden)	250,000	Software development and outreach
The Rockefeller Foundation	65,000	VSAT equipment
<b>Total</b>	<b>5,913,000</b>	



## 6. Sustainability and donor exit strategy

- Strategy: Self-reliance by the year 2009
- It is University policy to have a 2% contribution from income generated by all units of the University towards the ICT budget. This meets all ICT recurrent costs and has been in effect for the last four years.
- ICT Staff salaries are supported from the government supported payroll
- Targeting 2007, introduction of a technology fee of USD 30 per student per year is planned.
- The University policy also requires all units to include procurement of ICT resources in their annual budgets to match with the student numbers effective 2004/05.
- It is University policy to shift towards the use of Open-source software (Linux, open office, KEWL, etc). Though successfully implemented for the backend network services, the pros and cons of such applications at the user/desktop are being investigated and pilots planned.
- Establishment of a software development unit (incubator).
- Increased and cheaper bandwidth through consortia and competitive bidding approaches
- Transfer of equipment ownership to users to address increasing infrastructure and maintenance costs at the centre, space limitations and increased access for optimal use of ICT resources.

### Appendix 1: Summary of progress (Phase 1)

Table A1.

Component	Status (December 2004)
Instruction/E-learning	E-learning policy approved by University council
	Training of Trainers – a pool of 120 academic staff trained to pass on skills ( <i>course development</i> ) to others.
	Two E-learning platforms (Blackboard and KEWL) operational
Research and the Library	Implementation of a Library Management information system (VIRTUA-IIS); OPAC;
	Subscription to online journals;
	Improving the Library ICT infrastructure (increased access to online resources)
Administration/student affairs	Implementation of Management information Systems (ARIS, FINIS, HURIS)
	Business Process re-design of human resource, Academic records and financial systems
ICT infrastructure and services	A University-wide optical fiber backbone covering the four campuses
	A wireless backbone infrastructure for a few buildings not served by the fiber backbone.
	A 15Mbps/6mbps (CIR) Internet bandwidth
	Web, Email and Intranet services for all University students and staff.
	Building LANs and computer labs with a total for 2,700 networked computers.
	Ten student Internet kiosks with a capacity of 165 computers.
	Two Network Operation Centers housing the central university ICT services.
Staff training	Infrastructure, Networked training Computer lab (60 PCs)
	3,000 staff trained - ICDL courseware
ICT management	Establishment of a University ICT council Committee – Monitoring and control
	Establishment of an Information Resource Management unit - The Directorate for ICT Support (DICTS)

## Appendix 1

### Program for the Makerere University Stakeholders Meeting

Time	Agenda Item	Presenter	Session Chair
8:00-	Registration		
<b>Session 1: Building Capacity for Institutional Development</b>			
8:25-8:30	Opening Remarks	Prof. J. Oloka Onyango, Chair, Organising Committee	Chair: Vice Chancellor, Professor Livingstone Luboobi
	Welcome Remarks	Vice Chancellor, Professor Livingstone Luboobi	
8:30-9:00	Makerere University Institutional Development Program	Dr. E. K Kirumira	
9:01-9:15	Financial and Project Management	Mr. Sam Akorimo, University Secretary	
9:15-9:30	NORWAY/NUFU Support to the IDP	Dr. J.R.S. Kaboggoza, Chair, Norway support to IDP Steering Committee	
9:30-9:50	Discussion		
<b>Session 2: Research and the Role of Makerere in National Development</b>			
9:50-10:05	Sida/ SAREC Collaborative Research Program	Prof. E. Katunguka Rwakishaya, Director, Graduate School	Vice Chancellor, Professor Livingstone Luboobi
10:05-10:20	Carnegie support to the IDP	Dr. M.G. Nassuna, PDD	
10:20-10:40	Discussion		
10:40- 11:00	Tea Break		
<b>Session 3: Situating Makerere in the National, Regional and Global Environment Chair:</b>			
11:00- 11:15	Infectious Disease Institute	Prof. Nelson Sewankambo, Dean, Faculty of Medicine	Deputy Vice Chancellor Academic Affairs, Dr. L. Tibatemwa-Ekirikubinza
11:15-11:30	Capacity Building Program for Decentralisation	Dr. Nakanyike B. Musisi, Executive Secretary, <a href="mailto:�@mak.com">I@mak.com</a>	
11:30-11:45	Capacity Building Forum for Agriculture	Professor Adipala Ekamu Coordinator, Regional Universities Forum for Agriculture	
11:45-12:00	University Private Sector Partnerships	Mr. Hilary Obonyo, Executive Director UMA	
12:00-12:30	Discussion		
12:30-2:00	<b>Lunch</b>		
<b>Session 4: Way Forward :</b>			
2:00- 2:30	Donor Harmonisation	Report by AH Consulting	Deputy Vice Chancellor Finance and Administration Prof. David Bakibinga
2:30-2:45	Discussant Makerere University	Muhammad K. Mayanja, PDD	
2:45-3:15	Discussion on Harmonisation	Development Partners <ul style="list-style-type: none"> <li>✓ NORAD for of bilateral donors</li> <li>✓ Rockefeller Foundation for The Foundations</li> </ul>	
3:15-3:40	<b>Open Discussion</b>		
3:45-4:55	Issues and Options in the Next Strategic Planning Process	Florence Nakayiwa, PDD	
4:55-4:25	Tea Break		
4:25- 4:40	Wrap Up / Summary of Discussions	Prof. J. Oloka Onyango, Chair, Organising Committee	Vice Chancellor Professor L.S. Luboobi
4:30- 5:00	Closing Remarks	Chair Makerere University Council, Mr Gabriel Opio Chancellor: Prime Minister, Prof. Apollo Nsubambi	
6:00- 8:00	Cocktail	Makerere University Guest House	

