

INNOVATION SYSTEMS AND CLUSTERS PROGRAMME-UGANDA



PROGRESS REPORT TO THE PAN AFRICAN COMPETITIVENESS FORUM (PACF)

2011 TO-DATE



PACF 2011 Participants

INTRODUCTION

The following report provides a summary of the progress on the activities under Innovation Systems and Clusters Programme for the period 2011 to-date.

SECTION ONE: BACKGROUND TO INNOVATION SYSTEMS AND CLUSTERS

PROGRAMME-UGANDA

Innovation Systems and Clusters Programme- Uganda (ISCP-U) is a Makerere University wide programme coordinated by the Directorate of Research and Graduate Training (DRGT) and implemented by the College of Engineering, Design, Art and Technology (CEDAT) since 2005.

ISCP-U is part of the East African regional Pan African Competitiveness Forum, (PACF-EA), which in turn forms part of the continental Pan African Competitiveness Forum (PACF) that comprises of all cluster programmes in Africa. The Competitiveness Institute (TCI) is the International umbrella organization that brings together all continental fora (including the PACF), that nurture competitiveness through clustering processes.

This programme is one of the various initiatives that focus on competitiveness for SMEs through innovation and cluster approach. It aims at making Uganda's businesses more competitive locally and globally, through innovations and cluster initiatives.

Under the cluster system, ISCP-U brings together groups of independent firms, collaborating and competing; geographically concentrated in one area, and are specialised in a particular field, linked by similar technologies or skills. The operations of the cluster system are centred on the triple helix as a major driver, which consists of three key players, namely; the Government, the academia/universities and the private sector, including businesses especially Small and Medium Enterprises (SMEs). Innovative cluster initiatives are championed by trained facilitators, normally representing each component of the triple helix.

Since 2005, thirty one cluster initiatives have been launched country wide, representing different sectors of Uganda's economy. These include Management Consultancy, Kampala; Katwe Metal Fabricators, Kampala; Lake Katwe Salt mining, Kasese; Kakira Bio fuel, Kayunga Pine-apple; Basketry, Luwero; Garment and Textile, Kampala; Lira Bee Farmers; Specialty Coffee, Kapchorwa; Maize Millers, Jinja; Fish Farming, Kaliro; Super Goat, Wakiso; Fruit and Vegetable Processing, Luwero, Dairy processing, (South Western Uganda); Mushroom, Kampala; Building Materials, Kampala; Lubaga Furniture, Kampala; ICT Software, Kampala; Leather Processing, Jinja; Tree Planting, Masaka; Education, Kampala; and Seeds, Kampala; Kabonera Fish farming, Masaka; Teso region Innovation system (8 Nursery operators clusters - one in each of the districts) Clusters.

More cluster initiatives are proposed to be initiated, including; Upland Rice cluster in Masindi, Poultry cluster in Kampala, Millennium Quality Piggery cluster, Teso Region Citrus Innovation System (8 citrus farmers clusters and 8 citrus processors clusters) in Teso, Medical and Pharmaceutical cluster, Eco-Tourism cluster in Kigezi region, Cultural Tourism cluster in Kampala and the Chili cluster in Northern region, Gemstone mining in Karamoja, Ground nut cluster in Soroti, Creative and Performing Arts cluster in Kampala, as well as development of various clusters along the Petroleum belt.

The Cluster programme has registered success and made contributions in areas of research, increase in production and incomes, value addition, market creation and effective linkages, among others. There has also been an increase in awareness of the cluster concept. As such, there are various ongoing steps being taken toward mainstreaming clusters approach in government policy and programmes such as being undertaken by Uganda Investment Authority, Ministry of Trade, Industry and Cooperatives, Ministry of Finance, Planning and Economic Development (Competitiveness and Investment Climate Strategy).

SECTION TWO: ACTIVITIES

Local facilitator training to strengthen the development of cluster initiatives

A total of 28 Cluster Initiatives underwent Local Facilitator Training which incorporated business training as well. 196 Cluster leaders have been trained whose selection criteria included an average of 7 participants per Cluster with vested interest in the cluster i.e. business owner, government official in relevant department, and the academia included persons from either universities/research institutions or experts with commendable experience in the business that are often involved in transfer of their expertise or skill and knowledge. These are members who strictly are operating in geographical location of the cluster initiative for ease of coordination.

The training modules included were especially designed based on the experiences and lessons learnt from the pilot phase and the general African cluster experiences shared by other African countries under the PACF. These were designed to address critical cluster strategic areas vital in providing strategic direction for the individual cluster initiatives as well as the programme and citing appropriate intervention areas.



Left: Representatives of the 8 individual district Cluster Initiatives under the Teso Region Citrus Nursery Operators Innovation System attending the Local Facilitator Training, Soroti AS Dr. Yasin N Ziraba explains the Triple Helix Concept. Right: Members of Kayunga Pineapple Cluster develop an implementation plan during the training

New Cluster Initiatives

ISCP-U has enabled the initiation of new Cluster Initiatives such as the Fish Framing CLUSTER Initiative in Masaka Region, the Ajon Cluster in Soroti as well as 8 new Citrus Clusters in 8 districts in the Teso region which is in the North East of Uganda. Together, these 8 individual district Cluster Initiatives form the Teso Citrus Nursery Operators Innovation System

Partnerships and Collaborations Government Agencies

ISCP-U has continued to strengthen partnership with various players such as government agencies collaborating in and supporting cluster development as indicated by the information below.

Area of Collaboration	Government Agency
<ul style="list-style-type: none">• Initiation of Clusters (Ajon Soroti, Gemstone Karamoja, Performance Arts Kampala, Cotton Butaleja, Coffee Mpigi and several clusters in the Albertine Petroleum zone)• Business Training of Cluster Firms	Uganda Investment Authority
<ul style="list-style-type: none">• Initiation of Clusters (Teso Region Citrus Clusters – Nursery, farmers and processors)• Kigeszi Tourism Clusters	Competiveness Investment Climate Strategy (CICS), Min of Finance
<ul style="list-style-type: none">• Teso Region Citrus Clusters – Nursery, farmers and processors	Horticulture Unit and NAADS - Ministry of Agriculture, Animal Industry and Fisheries
<ul style="list-style-type: none">• Business Development Services and Funding	Private Sector Foundation – Uganda
<ul style="list-style-type: none">• Funding (Presidential Innovation Fund)	Presidents Office



Above: Participants listen to Dr. Yasin N Ziraba (ISCP-U Chairman National Steering Committee) during the Teso Region Citrus Nursery Operators Innovation System workshop that was co-organised by ISCP-U and Competitiveness and Investment Climate Strategy of the Ministry of Finance, Planning and Economic Development

Firm Level Innovations and Intellectual Property, Trademarks and Licensing

One of the ways to enhance research and innovation as a way of fostering competitiveness within the clusters was to establish existing innovations and ascertain which ones need further up scaling by the academia or out scaled for greater impact in addition to identifying other necessary aspects of research and innovation within the clusters. ISCP-U, therefore, documented over 80 innovations within the various Cluster Initiatives.

Although innovation is key to value addition and competitiveness hence the various innovations within the clusters; the challenge attached to this is the lack of protection of Intellectual Property and losses that accrue to this.

In collaboration with the IP Office at the Directorate of Research and Graduate Training Makerere University, 19 cluster innovations were further studied and are being handled with regard to IP aspects for the benefits of cluster firms. Some of these include: Tea harvesting

portable machine and Rural works Vehicle (Katwe Metal Fabricators Cluster); Use of plastics bushes to replace rubber or brass, aluminium spacers instead of hard rubber (Mushroom Clusters); as well as Web applications (ICT Software Cluster)

Knowledge Transfer and Students/ Researchers Attachment to Clusters

In order to strengthen academia-private sector linkages, ISCP-U undertook attachment of students and researchers to cluster firms/businesses. This aims at facilitating the transfer of knowledge and innovations resulting in increased competitiveness of businesses as well as enhanced relevance of Makerere University with regard to providing need-based research and appropriate skills. This programme not only gives students an opportunity to gain practical skills and exercise knowledge gained in class, it also supports the University in its endeavor to create job-seekers and enterprising individuals.

The table below indicates students so far attached to various clusters as an avenue of enhancing academia private sector linkages for the benefit of enabling knowledge transfer from the university into the businesses

Field	At Start	Now	Cumulative Increase
Entrepreneurship and Small Business Management (MUBS)	22	72	243 %
Mass Communication (MUK)		20	520 %
Industrial Fine Art		5	

Academic attachment is mainly done during semester holidays. Pre- and Post-attachment workshops are conducted for facilitators/the business owners and students to share experiences of the previous attachment process and draw lessons and guidelines for the next attachment programmes. They help to clarify the relevance of the attachment programme to both academia and cluster firms and are also attended by the respective academic departmental and faculty field attachment supervisors who also brief the students on the academic expectations.



Above: Students of Entrepreneurship and Small Business Management, Makerere University Business School share lessons learnt and experiences during the Post-Attachment workshop held at the MUBS Entrepreneurship Centre

Below is an indication of the relevance of academic attachment.

Course	Cluster	Contribution
Entrepreneurship and Small Business Management	All Cluster Initiatives	-Business Development knowledge and Skills such as book keeping and accounting, ICT, human resource management, marketing and advertising, financial management etc -Assessment and recommendation
Mass Communication	All Cluster Initiatives	-Publicity and media solutions to boost market accessibility and creation of strong and innovative business linkages -out puts include newsletters, documentaries(print, audio and video) -Marketing and advertising
Industrial Fine Art	All Cluster Initiatives	-Product design and development -Individual cluster log design and advertising -Product development and design especially for Textile and Garment, Basketry, Furniture and Leather Clusters -Packaging and branding for individual cluster firms

Value Addition through Equipment and Machines Design for Clusters

With the purpose of increasing Cluster firms’ access to cheaper and locally available technologies that will in turn enhance their competitiveness, ISCP-U is partnering with the Centre for Technology Design and Development in the attachment of a group of seven final year Mechanical Engineering students to produce prototype machinery and conduct a research study in 8 Cluster Initiatives. These are needed by businesses/firms within these Clusters for improved production and value addition as indicated below; however, these projects are also a necessary requirement by the University for the students to graduate

CLUSTER	MACHINE
Leather processing	Leather Design Imprinting Machine
<ul style="list-style-type: none"> • Fruits& Vegetables • Kayunga pineapple • Citrus • Chilli 	Juice Extractor
	Hybrid Fruit Dryer
	Slicing machine
Mushroom	Solar/ Biomass Mushroom Drier
Basketry	Used Straw Flattening Machine
Katwe Metal Fabricators Cluster	Feasibility Study for a Community Industrial Park



Above: Products of the Fruit and Vegetable Cluster, Luwero which need further value addition

Consultative meetings are held between the Students, Supervisors and Cluster Representatives in order to ensure that there is constant feed back and progress (design and construction) is aligned to expected market and academic demands and output.

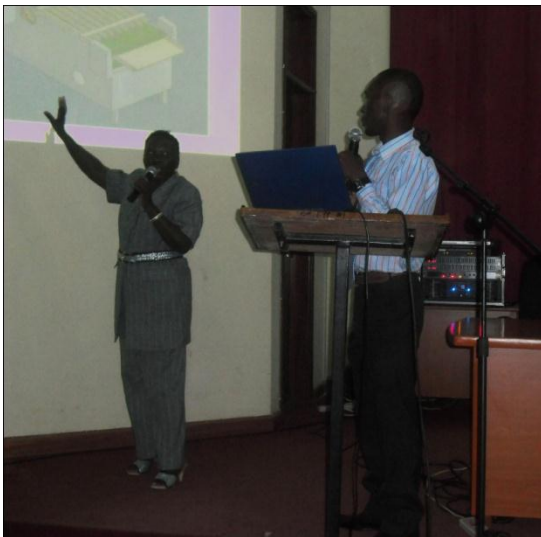


A Mechanical Student (right) describes the Used Straw Flattening Machine during two of the regular weekly consultative meetings in the ISCP-U Secretariat office while the (left) other students and the Secretariat members listen attentively

Major consultative meetings are also held at major phases and intervals such as start and end of design development and prior to construction. One such meeting has scheduled to take place on Wednesday 4th April 2012 with participants including students of Mechanical Engineering, their supervisors, Cluster representatives and other interested Academic staff within the various University colleges or academic units and fields. This is an opportunity to obtain feedback from the business men who will be the potential users.



Members from the Academia (Students, Supervisors, interested members from other University departments and projects, College Heads); Cluster Representatives and the Secretariat during the most recent consultative meeting



A Basketry Cluster Business member gives feed back on the Straw Flattening Machine specifications (left) while another student describe the specifics of the Solar/Biomass Mushroom Drier (right) during the consultative meeting

This partnership and the entire attachment program are only part of the broader objective of creating these academia- private sector linkages across the varying academic fields within the University as well as the numerous sectors or industries in which these businesses and clusters operate.

Baseline Survey

In order to consolidate past achievements and identify the most appropriate interventions and strategies to achieve objectives, there is need to ascertain, monitor and evaluate the trends, in growth, value addition, innovations, and improvements at various levels.

Second year and finalist students of Business Administration and Entrepreneurship and Small Business Management from Uganda Christian University as well Makerere University Business School together with Interns (waiting graduation) from the School of Social Sciences, College of Humanities were assigned to develop Business Diagnostic tools and conduct the Surveys for all the Cluster initiatives. These are useful in establishing the business viability of cluster firms, performance levels and interactivity index, among other indicators.

With the supervision of the Secretariat and Academic supervisors, a total of 20 Cluster Initiatives have undergone the study using the standard too and data generated.



Some of the businesses that participated in the Business Diagnostic Study (above and below)



Stakeholders Workshops and Exhibitions

PACF 2011

ISCP-U /PACF-Uganda organized and hosted the 3rd Pan African Competitiveness Forum held from 1st-4th February 2011 at Imperial Resort Hotel, Entebbe, Uganda. The Pan African Competitiveness Forum brought together stakeholders within Africa engaged in innovation and cluster based business competitiveness initiatives. The conference was attended by 322 delegates from 15 African countries, individuals from the private sector institutions in Uganda, Kenya and Tanzania, individual business men and women in the manufacturing sector, financial institutions, individual Cluster development practitioners, and international institutions from within and outside Africa. The Conference offered participants a platform to network and explore business and partnership opportunities and was graced with renowned authorities in global competitiveness in developed and emerging economies.

The conference focused on the theme; ***“Innovative Cluster Initiatives as Tools for African Economic Development.”***



PACF 2011 Participants attend a session

CEDAT Open Day

ISCP-U participated in the 1st College of Engineering, Design, Art and Technology Open Day, 18th – 19th November 2011 and this included an exhibition which the Textile and Garment, Kayunga Pineapple and Leather Cluster Initiatives were a part of. This offered these clusters an opportunity to market their products to the University community as well as the general public.



(Extreme left)Ms. Grace Twinamatsitko Secretariat Manager explains to (2nd from left) Dr. Birabi (CEDAT), (Centre) Assoc. Prof. Barnabas Nawangwe (ISCP-U National Coordinator/College Principal) and (Right) Prof. the Vice Chancellor

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