

Research Application Summary

Establishment and piloting of post graduate programmes in selected African post conflict countries

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Abstract

This paper shares experiences in the establishment and piloting of postgraduate programmes supporting agricultural development in selected francophone universities of Africa. Through stakeholder consultations six programmes were identified but only five were developed (2 in Burundi, 2 in Madagascar and 1 in D.R. Congo) by the local partners with the support from Agreenium, Montpellier, Makerere University and the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM). The programmes were accredited nationally, three were launched officially during the RUFORUM Vice Chancellor meeting in Windhoek, Namibia in August 2015 but only one is so far being piloted. Several challenges were identified during the processes of establishment and implementation of the developed postgraduate programmes in each the three countries. However, inadequate infrastructure, insufficient resources allocated to education and their unequal distribution between wages, pedagogy, research and investment, limited skilled manpower and inappropriate and/or lack of linkage with market/industry needs were the common challenges affecting their implementation. In addition, shortcomings in the university governance, leadership and communication with the line Ministries constituted barrier to the implementation of the developed programmes. Successful post graduate programme implementation will not only require solution to the aforementioned challenges but also an LMD implementation strategy.

Key words: Burundi, DR Congo, LMD, Madagascar, postgraduate training

Résumé

Cet article partage des expériences dans la mise en place et le pilotage des programmes de troisième cycle soutenant le développement agricole dans les universités francophones sélectionnées d'Afrique. Grâce à des consultations des parties prenantes, six programmes ont été identifiés, mais seulement cinq ont été développés (2 au Burundi, 2 au Madagascar et 1 en RD Congo) par les partenaires locaux, avec le soutien d'Agreenium, Montpellier, Université de Makerere et le forum régional des universités pour le renforcement des capacités en agriculture (RUFORUM). Les programmes ont été accrédités à l'échelle nationale, trois ont été officiellement lancés lors de la réunion des recteurs / vice-chancelier des universités membres de RUFORUM en Août 2015, à Windhoek, en Namibie, mais un seul est à ce jour mis à l'essai. Plusieurs défis ont été identifiés au cours des processus de mise en place et de mise en œuvre des programmes développés de troisième cycle dans chacun de trois pays. Cependant, les infrastructures inadéquates, des ressources insuffisantes allouées à l'éducation et leur répartition inégale entre les salaires, la pédagogie, la recherche et l'investissement, la main-d'œuvre qualifiée limitée et inappropriée et / ou l'absence de lien avec les besoins du marché / industrie étaient les défis communs qui affectent leur mise en application. En outre, des lacunes dans la gouvernance universitaire, le leadership et la communication avec les ministères de tutelle ont constitué l'obstacle à la mise en application des programmes développés. La mise en œuvre réussie du programme de troisième cycle ne nécessitera non seulement une solution aux défis mentionnés ci-dessus, mais aussi la stratégie de mise en application du programme Licence-Master-Doctorat (LMD).

Mots-clés: Burundi, RD Congo, LMD, Madagascar, formation postdoctorale

Background

Burundi, Madagascar and the Democratic Republic of Congo (DR Congo) are three African countries that have experienced conflict/civil war in the last three decades. Madagascar experienced its last civil war in 2009, DR Congo is just emerging from the first war which involved nine African countries and known as the first Africa world war, while Burundi has returned into conflict period after a decade of peace. The different wars led to the loss of million of lives, brain drain, and destruction of infrastructure including those from Higher Education Institutions. The civil war also affected several economic activities including in the agricultural sector. The three countries rely on agriculture as key contributor to their national GDP. Agriculture contributes from 25 to 33% to the GDP in DR Congo, 36.4% in Burundi mainly through coffee and tea crops, and 26.7% for Madagascar. The majority of the people involved in the sector are rural poor holding small sized gardens for their survival. Agriculture driven growth is known to have the potential to generate larger welfare effect than non-agriculturally driven growth, especially for the poorest people (World Bank, 2007) and higher income for farmers (Irz *et al.*, 2001).

The DR Congo and Madagascar governments have made significant progress in the stabilisation of their countries, rebuilding the infrastructure, revitalizing agricultural sector, reducing poverty and ensuring, to some extent, food security. Poverty reduction depends on

the production and consumption multipliers resulting from increased agricultural productivity and access to the market. Production is highly influenced by existing human and infrastructural capacity while consumption induced effect is a function of income, asset endowments and land distributions ((Mellor, 1999; Thirtle *et al.*, 2001). Building human capacity will have a multiplier effect on agricultural production and overall economic growth (World Food Summit, 1996). However, the current decline in public investment is of particular concern because public investment in basic infrastructure, human capital formation and research and development are necessary conditions for private investment and economic development (Antholt, 1994; Pardey *et al.*, 1992). Public investments also promote technology adoption, stimulate complementary on-farm investment and input use and are needed for marketing the agricultural goods produced (Nelson, 1981; Wozniak, 1989).

In an attempt to address the limited human capacity challenge in Burundi, DR. Congo and Madagascar, four African universities in partnership with RUFORUM and two European universities received EU-ACP funding to establish and pilot Postgraduate training in the three Post-conflict of Eastern, Central and Southern Africa. This paper shares experiences in establishing and piloting implementation of the developed postgraduate programmes in three francophone universities in Africa.

Methodology

A series of participatory approaches were used to identify and develop the postgraduate programmes and put in place conditions for piloting them. A scoping study was conducted in each of the three countries to guide the process and identify potential post graduate programmes to be developed. It also established the status of the infrastructure and human resource since these two factors are important for establishing viable academic programmes. Several consultations were held with key stakeholders in the three countries including Senior University management, Faculty Management, academic staff, scientists from research organisations, government policy makers, private sector representatives, students and farmers. National stakeholder meetings were organised after the scoping study to rank and prioritize the programmes to be developed based on a SWOT analysis results. Subsequently, six teams were constituted in the three countries to propose draft curriculum based on the East African curriculum development framework. This was done to facilitate future postgraduate programmes harmonisation and mobility schemes in the region. The draft curricula were shared with European partners (University of Bordeaux, Montpellier/SupAgro and University of Ghent), Makerere University in Uganda and University of Abomey Calavi in Benin for input. The final documents were reviewed in regional events with key stakeholders before submission to University Senates and line Ministry approval. The approved programmes were officially launched in August 2015 and commencement of the postgraduate programmes in the three countries was envisaged for 2016 with recruitment of the first batch of students.

Lessons learnt from the establishment and piloting of the postgraduate programmes

The three Universities (Universite du Burundi, Universite Catholique de Bukavu and Universite d'Antananarivo) were at different levels in terms of past experience in organising

postgraduate programmes. The Faculty of Agronomy at Universite Catholique de Bukavu (UCB) and Universite du Burundi (UB) had no postgraduate programme running. During the planning UB and UA prioritized more than one postgraduate programme. All the programme to be developed had strong support from the stakeholders and national/local government since they were aligned to government priority areas. Local research organisations had limited staff capacity and were looking for new programmes to support their staff development. In addition the following observations were made during the scoping studies:

a. Burundi

1. The new MSc programmes needed to be aligned to the 3-2-3 LMD system which had already been initiated in the country
2. The National Research Institute (ISABU) had very limited staff capacity (1 PhD and 6 MSc graduates) and was looking to the new MSc programmes to support its staff development
3. The new MSc programmes needed to be twinned to other programmes in the region and Europe for content development and delivery.

b. DR Congo

1. There was limited human and infrastructural capacity to run an MSc. programme
2. There was agreement among faculty members on the need to have an MSc programme but without consensus on the type of programme.
3. Both Institut National d'Etudes et Recherche Agricole (INERA) and Centre pour la Recherche en Science Naturelles (CRSN) had limited capacity in terms of high calibre staff to support the Postgraduate training.

c. Madagascar

1. There was adequate human capacity but limited infrastructure to run the MSc programme though had organized similar programmes (DEA) some years back.
2. They train University engineers who are recruited once every after five years creating a challenge on recruiting new candidates to study in the MSc programme before the five year interval.
3. The grading of the graduates of the MSc. Programme was still unresolved.
4. They had aligned their curriculum to LMD system and selected five options for MSc programmes development namely: Agriculture, Livestock and Environment, Natural Resources and Environmental Management, Post graduate programme co-organised by ESPA and IAA&GC and Food Science and Technology. However, they still had the need to have two more MSc programmes, one on Climate Change and Politics and another one on Quality, Hygiene, Safety and Environment (QHSE).

The need for six MSc programmes was more than what was proposed in the project document (three MSc programmes). This prompted the Lead Institution with the support of the other partners to seek for more financial resources to facilitate the development of the extra programmes. In response RUFORUM accepted to support the development of the other extra programmes in Burundi, and training of six Burundi MSc students. In Madagascar,

the UA was able to mobilize resources internally to facilitate the development of the extra programme and was also able to leverage resources from AGREENIUM for one programme. To take advantage of the support from AGREENIUM one UA staff travelled to France to develop the curriculum of one of the programmes. In addition RUFORUM provided funding to train 20 MSc students in Madagascar.

Out of six identified programmes by the stakeholders only five curricula were developed and submitted to relevant authorities for approval. By the end of 2015 only three programmes were launched during the RUFORUM Annual General Meeting in Windhoek, Namibia. However, due to various challenges only one programme has commenced (in Madagascar).

Achievements during the implementation of the programmes

1. Functional partnerships and institutional arrangements were specifically created involving Universite Catholique de Bukavu, Universite du Burundi and Universite d'Antananarivo with three well established European Universities (2 in France, namely Montpellier and Bordeaux, and one in Belgium, i.e., Universite de Gand), one in Africa (Makerere University), and three regional networks in Africa (Regional Universities Forum for Capacity Building in Agriculture (RUFORUM), Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) and Forum for Agricultural Research in Africa (FARA). The teams met regularly and sought out opportunities to leverage resources to scale up postgraduate training in the three focus post conflict countries in Africa.
2. Enhanced stakeholder engagement in development of the postgraduate programmes. Stakeholders meetings were held within the partner countries and at regional level and attracted many key personnel in the education sector and the business world. This allowed for consultations with a broader range of partners from Universities, government Ministries, NGOs and research institutions and representatives of the private sector. The dialogue led to greater focus on community and national goals and needs.
3. Development of programmes and support tools. The programmes established included MSc programme in Rural Development and Agro-business, and Plant Breeding in Burundi; MSc in Crop Science in DR Congo; and MSc Agro-ecology, Biodiversity and Climate Change (ABC) and MSc Quality Hygiene Sanitation and Environment (QHSE) in Madagascar (Table 1). In addition training materials were developed and encompassed scientific data management training manual and value chain training materials.
4. Piloting of post graduate programmes in post conflict countries. MSc training has started in Madagascar with the first cohort of 12 MSc students. The second cohort (10 MSc students) are currently being recruited.
5. Development of an LMD strategy. The advantages and requirements of the LMD system compared to the system implemented in many francophone countries include students and teachers mobility, harmonization of studies, diploma and university statutes, possibility of scholarship, increased relevance of university to the society, increased number of professional, society commitment to training process among others.
6. Greater visibility for the three francophone African Universities. The project has a functional and updated website which can be accessed through the link <http://postconflict->

Table 1. Programmes developed and status of implementation

University	Name of MSc programme	Progress made	Comments
University of Burundi	Rural Development and Agro-business	Curriculum and course modules developed	Awaiting implementation
	Plant Breeding	Curriculum and 2 course modules developed	Awaiting implementation
	Food Technology and Postharvest Management	Draft curriculum outline developed	Not much progress
Catholic University of Bukavu	Plant improvement	Curriculum, 2 course module developed,	To start next year
University of Antananarivo	ABC	Curriculum, 2 course module developed,	Being piloted , 16 students recruited
	QHSE	Draft curriculum	Need to be submitted to Senate for Approval

adecea.net/Through this website, the project has been able to increase its visibility and to share progress of implementation for all its activities due to its linkage with many other research organisations and academic institutions. It also helps link the three focus universities to over 50 other African Universities.

7. Development of a communication strategy. This included training in the French language for most staff involved in the implementation of the project activities.
8. Development of an M and E strategy. This was done early at the commencement of implementation of the Project and has helped to guide the implementation process. However, the team had to be strategic in holding regional meetings and took advantage of the RUFORUM convened regional conferences to hold its activities such as during the 2014 Biennial conference which had over 600 participants, the 2015 Annual General Meeting in Namibia which had nearly 200 participants, and during the 2016 Biennial Conference in Cape Town which had close to 800 participants. These regional platforms helped to increase visibility of the ADECEA project and EU support to higher education in Africa.

Challenges experienced

Postgraduate training faces challenges of demand, supply, quality and returns on investment with respect to both providers and clientele (Kearney, 2008). Further, the project was implemented in a post conflict environment, with one country (Burundi) returning to a conflict situation. Nevertheless most of the activities were implemented albeit with delays. The other challenges encountered included weak resource mobilization capacity at the focus institutions; inadequate staffing comprising of ageing faculty staff and difficulty in recruitment coupled with poor salaries; inadequate infrastructure including internet connectivity leading to delays in reporting; inability to upgrade teaching materials and very few opportunities for retooling and pedagogical training for staff; and political influence mainly resulting from lack of continuity in government priorities. In an attempt to address the above challenges where the project partners, the consortium conducted several capacity building activities in terms of resource mobilisation, responded to various calls for proposals. Resources were mobilised to train staff (young scientists) from UB and UCB within the region; and support was provided for in-country training of young scientists from Madagascar at UA.

Wayforward/ recommendations

- (i) More capacity building activities are required to build a critical mass of staff capable of competing with other scientists within the region in terms of resource mobilisation and strengthening the quality of graduate training in the three focus countries;
- (ii) There is need to promote internal quality assurance measures as well as embracing external quality assurance coupled with staff training on quality assurance issues;
- (iii) Strengthening partnerships with local, national, regional and international networks. This would also involve participation in joint postgraduate programs and building on existing EU-ACP research partnerships;

- (iv) Providing incentives in terms of seminars/ conferences attendance, recognition of exceptional researchers as well as publication; and
- (v) There is need to establish multi-disciplinary research centres that link with communities and associated indigenous knowledge and link with other research teams in the region.

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