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IDA/R2014-0089/1

March 27, 2014

<p>Closing Date: Tuesday, April 15, 2014 at 6 p.m.</p>

FROM: Vice President and Corporate Secretary

**Benin, Burkina Faso, Cameroon, Ghana, The Gambia,
Nigeria, Senegal, Togo and the Association of African Universities**

Africa Higher Education Centers of Excellence Project

Project Appraisal Document

Attached is the Project Appraisal Document regarding proposed credits to Benin, Burkina Faso, Cameroon, Ghana, The Gambia, Nigeria, Senegal, Togo and proposed grants to The Gambia and the Association of African Universities for an Africa Higher Education Centers of Excellence Project (IDA/R2014-0089), which is being processed on an absence-of-objection basis.

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Directors and Department Heads, Bank, IFC and MIGA

Document of
The World Bank

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Report No: PAD332

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT
ON PROPOSED CREDITS TO

REPUBLIC OF BENIN IN THE AMOUNT OF SDR5.3 MILLION
(US\$8.0 MILLION EQUIVALENT)

BURKINA FASO IN THE AMOUNT OF SDR5.2 MILLION (US\$8.0 MILLION EQUIVALENT)

REPUBLIC OF CAMEROON IN THE AMOUNT OF SDR5.2 MILLION
(US\$8.0 MILLION EQUIVALENT)

REPUBLIC OF GHANA IN THE AMOUNT OF SDR15.6 MILLION
(US\$24.0 MILLION EQUIVALENT)

REPUBLIC OF THE GAMBIA IN THE AMOUNT OF SDR1.3 MILLION
(US\$2.0 MILLION EQUIVALENT)

FEDERAL REPUBLIC OF NIGERIA IN THE AMOUNT OF SDR45.3MILLION
(US\$70.0 MILLION EQUIVALENT)

REPUBLIC OF SENEGAL IN THE AMOUNT OF SDR10.4 MILLION
(US\$16.0 MILLION EQUIVALENT)

REPUBLIC OF TOGO IN THE AMOUNT OF SDR5.2 MILLION (US\$8.0 MILLION EQUIVALENT)

AND PROPOSED GRANTS TO

REPUBLIC OF THE GAMBIA IN THE AMOUNT OF SDR0.7 MILLION
(US\$1.0 MILLION EQUIVALENT)

AND THE ASSOCIATION OF AFRICAN UNIVERSITIES
IN THE AMOUNT OF SDR3.3 MILLION (US\$5.0 MILLION EQUIVALENT)

FOR AN
AFRICA HIGHER EDUCATION CENTERS OF EXCELLENCE PROJECT

March 21, 2014

*Education – Central and West Africa (AFTEW) and Africa Regional Integration Department (AFCRI)
Africa Region*

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CURRENCY EQUIVALENTS

(Exchange Rate Effective 02/28/2014)

Currency Units	=	United States Dollars (US\$)
CFA Franc (Benin, Burkina Faso, Senegal and Togo) (XOF) 476	=	US\$1
CFA Franc (Cameroon) (XAF) 476	=	US\$1
Ghanaian Cedi (GHS) 2.56	=	US\$1
Nigerian Naira (NGN) 165	=	US\$1
Gambia Dalasi (GMD) 38.2	=	US\$1
SDR 0.64	=	US\$1
US\$ 1.55	=	SDR1

(Exchange Rate Effective 01/31/2014)

(applicable only to the Republic of Benin, for which negotiations took place in February 2014)

SDR 0.65	=	US\$1
US\$ 1.53	=	SDR1

FISCAL YEAR

(Benin, Burkina Faso, Cameroon, Ghana, Liberia, Nigeria, Senegal, and The Gambia)

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

AAU	Association of African Universities
ABU	Ahmadu Bello University
ACBF	African Capacity Building Foundation
ACE	Africa Centers of Excellence
ACE SC	Africa Centers of Excellence Steering Committee
APL	Adjustable Program Loan
CAADP	Comprehensive African Agriculture Development Project
CAMES	Conseil Africain et Malgache pour l'Enseignement Supérieur
CCMP	Commission de Contrôle des Marchés Publics
CEMAC	Communauté Economique et Monétaire de l'Afrique Centrale
CETIC	Centre d'Excellence en Technologies de l'Information et de la Communication
CAS	Country Assistance Strategy
CPS	Country Partnership Strategy
DLI	Disbursement Linked Indicator
DPL	Development Policy Loan
ECOWAS	Economic Community Of West African States
EEP	Eligible Expenditure Program
EOI	Expression Of Interest
ESMP	Environmental and Social Management Plan
FPFMD	The Federal Project Financial Management Division
GDP	Gross Domestic Product
ICT	Information and Communication Technology
IDA	International Development Association
IM	Implementation Plan

IPF	Investment Project Financing
IT	Information Technology
KNUST	Kwame Nkrumah University of Science and Technology
MDG	Millennium Development Goal
M&E	Monitoring and Evaluation
MoHERST	Ministry of Higher Education, Research, and Science and Technology
NCB	National Competitive Bidding
NCTE	National Council for Tertiary Education, Ghana
NTD	Neglected Tropical Disease
NUC	National Universities Commission, Nigeria
OAU	Obafemi Awolowo University
ORAF	Operational Risk Assessment Framework
PAD	Project Appraisal Document
PCU	Project Coordination Unit
PDO	Project Development Objective
PhD	Doctor of Philosophy
P-RAMS	Procurement Risk Assessment and Management System
P4R	Program for Results
RFU	Regional Facilitation Unit
QCBS	Quality- and Cost-Based Selection
R&D	Research and Development
SOE	Statement Of Expenditures
SSA	Sub-Saharan Africa
STEM	Science, Technology, Engineering and Mathematics
TA	Technical Assistance
TOR	Terms of Reference
USD	United States Dollar
WAEMU	West African Economic and Monetary Union
WACCI	West Africa Centre for Crop Improvement
UNESCO	United Nations Educational, Scientific and Cultural Organization
2iE	Institut International d'Ingénierie de l'Eau et de l'Environnement - International Institute for Water and Environmental Engineering

Regional Vice President:	Makhtar Diop
Country Directors:	Colin Bruce - Regional Integration Marie Francoise Marie-Nelly - Nigeria Gregor Binkert - Cameroon Yusupha B. Crookes – Ghana Vera Songwe – Senegal and The Gambia Ousmane Diagana – Benin, Burkina Faso, Togo
Sector Director:	Tawhid Nawaz (Acting)
Sector Managers:	Peter Nicolas Materu
Task Team Leader:	Andreas Blom

AFRICA
Africa Higher Education Centers of Excellence

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PAD DATA SHEET

Africa

Africa Higher Education Centers of Excellence Project (P126974)

PROJECT APPRAISAL DOCUMENT

AFRICA

AFTEW

Report No.: PAD332

Basic Information			
Project ID P126974	EA Category B - Partial Assessment	Team Leader Andreas Blom	
Lending Instrument Investment Project Financing	Fragile and/or Capacity Constraints []		
	Financial Intermediaries []		
	Series of Projects []		
Project Implementation Start Date 15-April-2014	Project Implementation End Date 31-Dec-2018		
Expected Effectiveness Date 15-July-2014	Expected Closing Date 31-Dec-2018		
Joint IFC No			
Sector Manager Peter Nicolas Materu	Sector Director Tawhid Nawaz (Acting)	Country Director Colin Bruce	Regional Vice President Makhtar Diop
Borrowers: Ministry of Economy and Finance (Benin), Ministry of Economy and Finance (Burkina Faso), Ministry of Economy, Planning and Regional Development (Cameroon), Ministry of Finance (Ghana), Federal Ministry of Finance (Nigeria), Ministry of Economy and Finance (Senegal), Ministry of Finance and Economic Affairs (The Gambia), Ministry of Economy and Finance (Togo), and the Association of African Universities			
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Responsible Agency: Ministry of Higher Education, Burkina Faso			
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Responsible Agency: Economic Community of West African States (ECOWAS)			
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Responsible Agency: Ministry of Higher Education, Research, Science and Technology, The Gambia			
Contact: Chernoo Omar Barry		Title: Permanent Secretary	
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Responsible Agency: Association of African Universities			
Contact: Etienne Ehile		Title: Secretary General	
Telephone No.: 233-21-214-100		Email: Eehile@aau.org	
Project Financing Data(in USD Million)			
<input type="checkbox"/> Loan	<input type="checkbox"/> Grant	<input type="checkbox"/> Guarantee	
<input checked="" type="checkbox"/> Credit	<input checked="" type="checkbox"/> IDA Grant	<input type="checkbox"/> Other	
Total Project Cost:	290.80	Total Bank Financing:	150.00
Financing Gap:	0.00		
Financing Source		Amount	
BORROWER/RECIPIENT		140.80	
International Development Association (IDA)		41.50	
IDA Grant		1.00	
IDA recommitted as a credit		102.50	
IDA recommitted as a grant		5.00	

Total IDA						150.00
TOTAL						290.80
Expected Disbursements (in USD Million)						
Fiscal Year	2014	2015	2016	2017	2018	2019
Annual	10.00	20.00	30.00	37.00	40.00	13.00
Cumulative	10.00	30.00	60.00	97.00	137.00	150.00
Proposed Development Objective(s)						
The Project Development Objective is to support the Recipients to promote regional specialization among participating universities in areas that address regional challenges and strengthen the capacities of these universities to deliver quality training and applied research.						
Components						
Component Name				Cost (USD Millions)		
Component 1: Strengthening Africa Centers of Excellence				140.80		
Component 2: Enhancing Regional Capacity, Evaluation, and Collaboration				9.20		
Institutional Data						
Sector Board						
Education						
Sectors / Climate Change						
Sector (Maximum 5 and total % must equal 100)						
Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %		
Education	Tertiary education	50				
Agriculture, fishing, and forestry	Agricultural extension and research	15				
Health and other social services	Health	15				
Energy and mining	Oil and gas	10				
Energy and mining	Other Mining and Extractive Industries	10				
Total		100				
[X] I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.						
Themes						
Theme (Maximum 5 and total % must equal 100)						
Major theme	Theme	%				

Human development	Education for the knowledge economy	70	
Trade and integration	Technology diffusion	20	
Human development	Health system performance	10	
Total		100	
Compliance			
Policy			
Does the project depart from the CAS in content or in other significant respects?	Yes []	No [X]	
Does the project require any waivers of Bank policies?	Yes []	No [X]	
Have these been approved by Bank management?	Yes []	No []	
Is approval for any policy waiver sought from the Board?	Yes []	No [X]	
Explanation:			
Does the project meet the Regional criteria for readiness for implementation?	Yes [X]	No []	
Safeguard Policies Triggered by the Project	Yes	No	
Environmental Assessment OP/BP 4.01	X		
Natural Habitats OP/BP 4.04		X	
Forests OP/BP 4.36		X	
Pest Management OP 4.09		X	
Physical Cultural Resources OP/BP 4.11		X	
Indigenous Peoples OP/BP 4.10		X	
Involuntary Resettlement OP/BP 4.12		X	
Safety of Dams OP/BP 4.37		X	
Projects on International Waterways OP/BP 7.50		X	
Projects in Disputed Areas OP/BP 7.60		X	
Legal Covenants			
Name	Recurrent	Due Date	Frequency
Maintain institutional arrangements for the Project	X	Recurrent	SemiAnnual
Description of Covenant			
<p>Each participating country shall maintain throughout the project:</p> <p>(a) its Representative in the Steering Committee to provide overall guidance and oversight for the Project and to participate with at least semi-annual meetings.</p> <p>(b) the National Review Committee to hold semi-annual reviews of performance and implementation support.</p> <p>(c) the Implementation Team to run the day-to-day management</p>			
Name	Recurrent	Due Date	Frequency

Prepare an annual work plan	X	30-Nov-2014	Annual
Description of Covenant The Recipient shall each calendar year, prepare, in cooperation with the Participating University (ies) and furnish to the Association, a program of activities and budget.			
Name	Recurrent	Due Date	Frequency
Regular reports (the EEP Spending Reports) prepared in accordance with the Project Regional Operations Manual	X	31 – Dec-2014	SemiAnnual
Description of Covenant The Recipient shall furnish to the Association every semester starting six months after the Effective Date, regular reports (the Eligible Expenditure Program Spending Reports) prepared in accordance with the provisions of the Project Regional Operations Manual and the additional instructions referred to in Section IV.A.1 of this Schedule.			
Name	Recurrent	Due Date	Frequency
Verification of DLIs	X		SemiAnnual
Description of Covenant (applicable to all countries except The Gambia) The Recipient shall, by no later than two months after the Effective date, appoint external monitoring and evaluation experts (“ Independent Verifiers”) to act as third-party verifiers of the proper fulfillment of DLIs as set forth in Schedule 4 of the Financing Agreement”.			
Name	Recurrent	Due Date	Frequency
Recruitment of an external auditor	X	31 – Dec-2014	
Description of Covenant (applicable to all countries) The Recipient shall, not later than six months after the Effective Date, recruit an external independent auditor, under terms of reference and with qualifications acceptable to the Bank.			
Conditions			
Name	Type		
Signed and ratified Performance and Funding Contract	Effectiveness		
Description of Condition (applicable to all countries except The Gambia) The Performance and Funding Contract between the recipient and participating university (ies) has been executed in form and substance satisfactory to the Association, and has been duly authorized and ratified.			
Name	Type		
Set up of implementation and national review team	Effectiveness		
Description of Condition (applicable to all countries except The Gambia, Nigeria, and Togo) The Implementation Teams and the National Review Committee have been created, all in form and substance satisfactory to the Association, respectively by the Participating Universities and by the Recipient			
Name	Type		
Endorsement of Regional Project Operations Manual	Effectiveness		
Description of Condition (applicable to all countries) The Project Regional Operations Manual has been endorsed by the Recipient in form and substance satisfactory to the Association.			

Name			Type
Adoption of the Regional Project Operations Manual			Effectiveness
Description of Condition (applicable only to the AAU) The Project Regional Operations Manual has been adopted by the Recipient in form and substance satisfactory to the Association.			
Name			Type
Establishment of ACE Steering Committee and Regional Facilitation Unit			Effectiveness
Description of Condition (applicable only to the AAU) The Regional Steering Committee and the Regional Facilitation Unit have been created and established in form and substance satisfactory to the Association.			
Name			Type
Annual workplan with fiduciary manuals			Effectiveness
Description of Condition (applicable to all except The Gambia) The Annual Work Program for the first year of the Project, the Implementation Plan (including the Financial Management Procedures Manual and the Procurement Procedures Manual) have been prepared and adopted by the Participating Universities all in form and substance satisfactory to the Association.			
Name			Type
Clear backlog of financial audits			Effectiveness
Description of Condition (only applicable to Benin and Togo) The 2011 and 2012 audits for the Africa Centers of Excellence of the Participating University have been presented to the Association in form and substance satisfactory to the Association			
Team Composition			
Bank Staff			
Name	Title	Specialization	Unit
Andreas Blom	Lead Education Economist	Team Lead	AFTEE
Peter Nicolas Materu	Sector Manager, Education	Sector Manager	AFTEW
David J. Nielson	Lead Agriculture Services Specialist	Agriculture Education	AFTA2
Himdat Iqbal Bayusuf	E T Consultant	Education Specialist	AFTEW
Atou Seck	Senior Education Economist	Education, Senegal	AFTEW
Eunice Yaa Brimfah Ackwerh	Senior Education Specialist	Education, Ghana	AFTEW
Hyacinthe Gbaye	Education Economist	Education, Benin	AFTEW
Adama Ouedraogo	Senior Education Specialist	Education, Burkina Faso	AFTEW
Olatunde Adekola	Senior Education Specialist	Education , Nigeria	AFTEW
Shobhana Sosale	Senior Education	Education, Cameroun	AFTEW

	Specialist				
Pamela Mulet	ET Consultant	Education, Togo	AFTEW		
Nathalie Lahire	Senior Education Specialist	Education, The Gambia	AFTEW		
Janet Omobolanle Adebo	Team Assistant	Team Assistant	AFTEW		
Hille Frey	Consultant	M&E and accreditation	AFTEW		
Christopher H. Herbst	Health Specialist	Health Specialist	AFTHW		
Carl Erik Schou	ET Consultant	Agriculture Education	AFTA2		
Ok Pannenburg	Consultant	Health education	AFTEW		
Kristina Svensson	Senior Operations Officer	Extractive industries	SEGM1		
Isabella Micali Drossos	Senior Counsel	Senior Counsel	LEGOM		
Luis M. Schwarz	Senior Finance Officer	Senior Finance Officer	CTRLA		
Patrick Piker Umah Tete	Senior Financial Management Specialist	Financial Management, regional	AFTMW		
Allan Rotman	Lead Procurement Specialist	Procurement, regional	AFTPW		
Liba Feldblyum	Operation Analyst	Environment safeguards	AFTN3		
Hocine Chalal	Lead Environment Specialist	Environment safeguards	AFTN1		
Non-Bank Staff					
Name	Title	Office Phone	City		
Locations					
Country	First Administrative Division	Location	Planned	Actual	Comments
Cameroon	Centre Region	Yaounde		X	Université de Yaoundé I
Senegal	Dakar	Dakar		X	Université Cheikh Anta Diop de Dakar - Sénégal
Senegal	Thies	Thies		X	Université Gaston Berger
Ghana	Greater Accra	Greater Accra Region		X	University of Ghana Legon
Ghana	Ashanti	Ashanti Region		X	Kwame Nkrumah University of Science and Technology

					(KNUST)
Nigeria	Rivers	Rivers State		X	University of Port Harcourt
Nigeria	Ogun	Ogun State		X	Redeemer's University
Nigeria	Ogun	Ogun State		X	Federal University of Agriculture, Abeokuta
Nigeria	Kano	Kano State		X	Bayero University
Nigeria	Kaduna	Kaduna State		X	Ahmadu Bello University,
Nigeria	Plateau	Jos		X	University of Jos
Nigeria		Ife		X	Obafemi Awolowo University
Nigeria	Benue	Benue State		X	Benue State University
Nigeria	Edo	Benin City		X	University of Benin
Nigeria	Abuja Federal Capital Territory	Federal Capital Territory		X	African University of Science and Technology
Togo	Maritime	Maritime		X	Université de Lomé
Benin	Atlantique	Atlantique Department		X	Université d'Abomey-Calavi
Gambia, The	Banjul	Banjul		X	
Burkina Faso	Centre	Centre		X	Institut International d'Ingénierie de l'Eau et de l'Environnement 2iE

I. STRATEGIC CONTEXT

A. Country Context

1. **Sub-Saharan Africa (SSA) has an unprecedented opportunity for transformation and sustained growth.** Gross Domestic Product (GDP) growth has accelerated from an average annual rate of 2 percent during the 1990s to 5.5 percent in the last decade. The economies outside of South Africa grew in 2012 at a robust rate of 5.8 percent-higher than the average developing country. Seven West African countries were among the fastest 35 growing countries in the world in 2012, notably Sierra Leone, Niger, Cote d'Ivoire, Liberia, Burkina Faso, Ghana, and Nigeria. This remarkable economic turnaround is the result of increasing macroeconomic stability, reforms which have whittled away market imperfections and most consequently, of rapidly increasing global demand for the natural resource based commodities exported by Sub Saharan Africa. After more than two decades of stagnation, the recent spurt of economic growth is an encouraging development.

2. **Despite this strong economic growth, West and Central Africa face significant development challenges.** Key among them is an undiversified production structure. Adding value to production and diversifying national economies by stimulating development of new competitive sectors is a significant challenge. The countries need to capitalize on the commodity boom to ensure domestic economic spillovers in the form of well-paid jobs and seek to move into more knowledge and technology-intensive activities that add value. Furthermore, while progress on the Millennium Development Goals (MDGs) has been rapid in some countries, significant challenges remain, especially with regards to health MDGs such as maternal health, where the maternal mortality rate is 500 per 100,000. And despite improvements in recent years, 3.8 million children below the age of five continue to die annually in Africa. Low rates of skilled birth attendance, high fertility rates; infectious diseases such as malaria and HIV/AIDS, and prevalence of neglected tropical diseases (NTD) that most commonly affect the poor continue to weaken population health, as well as economic productivity and growth. Malnutrition, lack of food security and low productivity in agriculture is another considerable challenge in West and Central Africa, especially in the Sahel countries where an estimated 20 million people are at risk of food insecurity. Additionally, weak governance, state fragility, youth unemployment and climate change, are substantial challenges facing African countries.

3. **There are immediate skill shortages in addressing development challenges and poverty reduction in West and Central Africa.** This skills shortage is severe in the growing sectors of extractive industries, energy, water, and infrastructure; and in service sectors, such as health and Information and Communication Technologies (ICT). The level of scientific and technological capacity embodied in the future African workforce will be critical to transforming African economies. For instance, extractive industries demand specialized civil, electrical and petroleum engineers as well as geologists, and environmental and legal specialists. In many countries in the region, these positions are currently filled by expatriates, although to a lesser extent in Nigeria and Ghana. Most importantly, the lack of skills for the extractive industries prevents African countries from establishing local suppliers that generate domestic economic spillovers and additional jobs. Another example of a critically needed skill is health workers' expertise to oversee pregnancies and deliveries (Maternal and Child Health – MDG 4 and 5), or treat infectious and/or chronic diseases. A key constraint is the inadequacy of specialized skills

in Obstetrics, Pediatrics or General Surgery, infectious diseases, neglected tropical diseases and reproductive health (required in particular for faculty to train health workers). In Agriculture, skill shortages are equally immediate. Africa needs a green revolution, and agriculture has also experienced a revival in investments. However, these investments have not been accompanied by development of related human capital. In Brazil, masters programs in agricultural sciences and problem-oriented research centers have boosted agriculture productivity. For African economies to undertake a similar transformation to move from a net importer to net exporter, post-farm high yielding technologies, including food preservation technologies, need to be adapted and applied. A shortage of crop and animal scientists, as well as veterinarians, and agronomists has become a bottleneck in transforming agriculture in the region. For example, plant breeders and crop scientists with specialization in African indigenous crops such as sorghum, millet, and cassava that are of little or no importance to agriculture schools in the high-income countries, are required. These development challenges will not be overcome without initiatives to produce the necessary quality and relevant skilled labor. West and Central Africa would benefit substantially if the region's higher education institutions trained more graduates with these demanded skills and if these graduates were of higher quality.

4. **In the medium run, sustained economic growth in Africa requires an increase in science and technology (S&T) capacity, more skilled labor and applied research to increase technology absorption, raise total factor productivity, and generate new competitive sectors.** Africa is at the bottom of almost every knowledge economy indicator. For instance, it contributes 0.07 percent of global patent applications, an indication of the continent's lack of technological leadership. The region has some of the lowest researcher-to-population ratios in the world with 17 researchers in Research and Development (R&D) per million people in Ghana, 38 in Nigeria and 45 in Burkina Faso compared to an average of about, 481 in Latin America, 1,714 in East Asia and Pacific and 2,664 in Europe and Central Asia. Improving these indicators is a top-priority for knowledge-based economic growth in Africa, but a gradual improvement should be targeted while addressing specific immediate skill shortages. Such investment would generate high quality professionals with higher order skills, entrepreneurial spirit, and research capacity, especially within S&T fields. Part of the driving force of the East-Asian economic miracle was a dramatic buildup of a technical and technological workforce prepared by an ever-improving education and applied research system, in close coordination with well thought-out national and sector policies. These are also capacities which SSA requires for sustaining and further accelerating economic growth, and for addressing both health and agriculture related challenges. These capacities will also be important for diversifying the SSA economies by increasing the likelihood of new economic growth sectors with higher value added. Few foresaw the creation of a US\$100 billion IT-Business Processing Outsourcing industry capable of sustaining an estimated 12 million middle-income jobs in India, when four Indian Institutes of Technology were established in the 1950s. There are, therefore, considerable medium and long term gains if the higher education institutions in West and Central Africa step up to the challenge and respond to immediate skills demands and needs.

B. Sectoral and Institutional Context

5. **West and Central African countries face a particular shortage of human resources and capacity within Science, Technology, Engineering, and Mathematics (STEM) as well as agriculture and health disciplines.** Although, there are considerable differences across the higher education systems in the region, a key common characteristic is a pattern of skills production that does not match labor market demand or development needs. Table 1 shows that the percentage of graduates in areas of engineering, agriculture, health and science is extremely low. Nigeria being an exception in the region. The result is that while graduates of many West and Central African higher educational institutions are unemployed, substantial shortages of skilled labor persist. The challenge is therefore to increase both the quantity and the quality of graduates through investments in laboratories and human resources for these disciplines, improve the link with employers to raise relevance of education and foster strong international collaboration to increase quality of education

Table 1 Percentage of higher education graduates by field of study

Academic field	Benin (2009)	Burkina Faso (2011)	Cameroon (2010)	Ghana (2011)	Nigeria (2011)	Brazil (2010)
Agriculture	0.8	1.5	...	7.4	4.7	1.8
Education	-	7.6	10.3	25.6	14.0	22.8
Engineering, Manufacturing and Construction	5.6	2.8	4.0	3.9	10.2	5.8
Health and Welfare	2.8	0.6	2.3	3.4	5.6	13.9
Humanities and arts	14.5	11.4	6.4	-	8.8	2.2
Social sciences, Business and Law	52.5	55.6	59.2	43.2	33.1	40.2
Science	3.5	15.0	17.0	15.5	23.7	5.5
Services	7.5	5.5	-	-	-	2.9
Unspecified programs	12.6	-	-	1.1	-	5.0
Total number of graduates	14,638	14,782	40,327	28,005	182,683	1,024,743

Source: UNESCO UIS, <http://stats.uis.unesco.org> retrieved March 25, 2013.

6. **Higher education in West and Central Africa is under-developed and has been a low priority for the past two decades.** Access to higher education for the relevant age group remains at 5 percent, the lowest regional average in the world, and just one-fifth of the global average of about 25 percent. Further, women are underrepresented in higher education, particularly in the S&T fields. With regards to quality, not a single West and Central African university features in the rankings of the world's best 500 academic institutions. Further, a backlog of reforms has accumulated over the last few decades. A key consequence of underdeveloped higher education institutions is also high rates of migration of talent out of Africa in pursuit of training and research opportunities abroad (brain drain). For example, the low availability of post-graduate training opportunities for health workers in Africa within Obstetrics, Pediatrics, Reproductive Health, Infectious Diseases, and General Surgery is a primary reason why many health workers migrate abroad.

7. **Limited investment has meant that higher education institutions in West and Central Africa are currently not capable of responding to the immediate skills needs or**

supporting sustained productivity-led growth in the medium term. This is because there are: disconnect with the needs and skills demands of the economy, no critical mass of high quality faculty, insufficient sustainable financing, and shortcomings in governance and leadership. More broadly, there is inadequate regional specialization of the higher education systems in West and Central Africa. Each of these challenges is discussed below.

8. Higher education policies are disconnected from regional and national development priorities resulting in gaps between labor market demand and competencies of graduates.

This has led to high unemployment among graduates, especially for graduates of social sciences and humanities. At the same time, there are job opportunities in specific expanding sectors of the economy, such as the extractive and ICT sectors. The gaps are a result of several factors: (i) inertia in opening new or updating existing degrees, including new S&T degrees closely corresponding to emerging labor market needs; (ii) limited focus on applied or practical experience during training; (iii) limited employer input into curricula and the teaching-learning process; (iv) low attention to general employability skills, such as learning-to-learn, problem-solving, project and team-work, and communication skills; (v) degraded learning equipment and infrastructure for teaching; (vi) overall limited learning of students entering from secondary education, in particular within math and natural sciences; (vii) insufficient attention to preparing and assisting graduates to actively search for a job and/or be entrepreneurial, and (viii) a sizable informal private sector that still has a low tendency to invest in skills and technology. These factors are, in turn, associated with policy and funding shortcomings, such as not tying institutional funding to development needs resulting in limited incentives for performance and poor accountability of results. To improve this, governments and institutions could consider increasing interaction between employers and faculty, placing students in internships during studies, introducing new or reshaped education programs, and investing in faculty training and learning resources as well as increasing measurement and accountability of results.

9. Higher education in Africa faces severe constraints in terms of attaining a critical mass of quality faculty. The average percentage of staff with a doctoral level degree in public higher education institutions in Africa is estimated to be less than 20 percent (based on 10 countries in the region). Many university departments do not have more than one or two senior professors; many close to retirement age. This prevents departments and universities from being able to provide relevant higher education training, and establishing vibrant research environments. Moreover, low salaries of faculty, lack of research funding and equipment, as well as limited autonomy provide disincentives for professors to stay in African universities. This is particularly challenging for smaller countries, such as The Gambia, where faculty frequently leave the country. However, some universities have pockets of highly competent and motivated faculty. Therefore, there is an opportunity to train faculty from smaller countries through the promising universities in the region in order to lower costs and increase relevance of education and the likelihood of returning to the home country.

10. Financing for higher education is not sustainable without sufficient funding coming from affluent households and the private sector. Public funding is scarce and will not be able to indiscriminately finance expansion and improved quality of higher education. The amount of public resources invested in the education sector is, on average, lower in Africa's low-income Francophone countries (2.7 percent of GDP) than in Anglophone countries (4.5 percent). In 33 low-income SSA countries, this limited investment led to a per student expenditure decline from US\$ 6,800 in 1980 to US\$981 in 2010. Further, the majority of higher education students come

from relatively affluent households that can usually contribute in a substantial way to the costs of higher education. Public funding should increasingly be targeted to low-income students or strategic areas of higher education where private investments are not forthcoming, such as S&T. Institutions should supplement public funding with fees, consultancies, and donations.

11. Nurturing the fast growth of private higher education is critical to providing youth more educational possibilities, while also making public investments in higher education more strategic. Over 1,000 private non-university institutions have emerged in SSA, and private institutions now cater to 1 in 4 students. Although there are exceptions, private provision predominantly takes place in urban areas and within low-cost bachelor programs oriented towards professional jobs. Appropriate national policy responses would be undertaking steps to stimulate growth of quality private education and to support low-income students who cannot pay. Further, governments could prioritize funding to areas of high social return that private institutions tend not to focus on, such as lab-requiring S&T degrees and research-based education, and provide incentives for private institutions to move into these activities.

12. Demand for higher education will grow tremendously over the coming decades as a consequence of massive expansion in access to basic education. Although, learning is at times mediocre, a substantially larger share of young cohorts will be knocking on the doors of higher education in the coming decade. This wave of young people with basic education will not be allowed to realize their human and economic potential if the region's higher education systems are not transformed to accommodate the growth. Preparing the higher education systems to give economically meaningful education to the increasing student population without repeating the damaging low-quality and low-employability expansion experienced in North Africa, is of high importance.

13. Governance and leadership is integral to the development of higher education systems that respond to the needs of the West and Central African economies. Legal frameworks for governance and leadership in many African countries are generally commensurate with the development of good governance by requiring merit-based selection of Rectors/Vice-Chancellors, existence of governing bodies, academic autonomy, and reasonable financial autonomy. However, some countries have legal frameworks and governance practices that are not conducive to good governance. Further, dynamic and empowered institutional leadership is a critical drive of institutional excellence. In a number of universities, a poor governance framework and leadership have led to a disruption in basic functioning, such as students or faculty strikes and months of delay of classes or exams. Investments in higher education should ensure that the governance framework is conducive to excellence, providing reasonable financial autonomy and enhancing accountability of the institution and the governing body. Further, targeted investments should take place only in institutions exhibiting high quality leadership. Lastly, investments should promote internal decentralization in the administration of resources, and promote the use of management information systems and transparency in administration, use of resources, and communication of results.

14. A regional approach to higher education in Africa offers the best way to build and sustain excellence in higher education in African economies. Few, if any, West and Central African countries have the persistent means to fund internationally competitive centers of excellence in the broad range of areas required for their economies. Regional specialization and coordination of investments is the only way that West and Central African countries can financially and academically develop quality provision of higher education in this broad range.

Without coordinated investments, the region risks investing very scarce resources within the same areas, competing for the same faculty and producing similar knowledge, and more importantly, leaving the region with a number of lacunas in skills, knowledge and technology. A regional specialization of higher education will: (i) concentrate the limited available top-level faculty into a critical mass that can attain academic excellence; (ii) establish and sustain the necessary number of centers of excellence to support the region's demand for specialized human capital and knowledge; and (iii) generate increased knowledge and flow of students across borders.

15. **A regional approach would work best in focusing on the few dynamic institutions with pockets of quality faculty that have already been responding innovatively by offering quality, fee-based, courses to students across West and Central Africa.** Success factors for regional collaboration in higher education are (i) collaboration through specialization, (ii) political emphasis on common standards, in the form of accreditation, and (iii) willingness to promote mobility of students and faculty. Institutions and centers within universities across West and Central Africa that already specialize in offering high level training (STEM), Agriculture and Health Sciences. Supporting these institutions will allow them to improve lifting quality of education in the region within their fields through partnerships, and allow them to compete with institutions in high-income countries for African students capable of paying for quality education.

C. Higher Level Objectives to which the Project Contributes

16. **The higher order objective of the proposed project is to meet the labor market demands for skills within specific areas where there are skill shortages affecting development, economic growth and poverty reduction.** This will be monitored through the employment rate of graduates of supported institutions. Further, the project will, on a demand basis, invest in well performing universities that can start building a foundation for Africa to increase knowledge and technology absorption, and build knowledge-based competitive advantages. The project design is innovative and cross-sectoral. It is envisioned to herald in a new wave and modality of support to African higher education. The project will generate lessons on the impact of the following key aspects for Africa's higher education: (i) creating a pattern of regional specialization among African universities; (ii) assisting African higher education institutions to tightly link their education and research with the region's development needs; (iii) using results-based financing; (iv) developing dynamic institutions that gradually become more independent financially, managerially, and administratively; and (v) helping African institutions meet international quality standards. Subsequent operations in West and Central or in Eastern and Southern Africa would benefit from these lessons.

17. **The proposed higher education project is aligned with Pillar 1 of the World Bank Africa Strategy Strengthening Competitiveness and Employment.** This pillar includes a focus on investments in "areas of highest growth potential, a healthy and skilled workforce, women's empowerment, and regional integration programs". Consultations for the strategy revealed that education was the area in which the World Bank could make the biggest difference in helping Africa create jobs, confirming the urgent need to improve universities, increase academic contact with countries outside Africa, develop technical programs, and provide the

means to expand access to higher education. As the only regional project investing in human capital, it complements the current infrastructure-heavy portfolio of regional projects.

18. The project forms part of the Regional Integration Assistance Strategy which coordinates interventions for regional public goods. This strategy envisages that the proposed operation will facilitate economies of scale in the use of facilities, equipment, and staff in specialized fields of study; promote the sharing of innovations in curricula, pedagogy, and approaches to teaching, learning, and research across countries; and enhance cross-border research networks. This project is also included in the relevant Country Partnership Strategies (CPSs) for West and Central Africa. Finally, the project is also aligned with the World Bank Strategy for Education: Learning for All.

19. The project aligns with strategies of regional African organizations of Economic Community of West African States (ECOWAS) and West African Economic Monetary Union (WAEMU). ECOWAS highlights the proposed project as fully aligned to the ECOWAS Protocol on Education and Training as well as the Policy and Plan of Action on Science and Technology. Additionally, the Africa Union Second Decade for Education and other strategies provide a strong push for harmonization of higher education on the African continent, building upon a regional harmonization first. WAEMU equally strongly supports the proposed project. The project will also support the implementation of sector-level human capital plans such as the Comprehensive African Agriculture Development Project (CAADP) and the Africa Mining Vision.

20. National development strategies across West and Central Africa increasingly emphasize higher education for development. For example, the National Planning Commission in Nigeria stresses the need for university reforms to better align the skills of university graduates with those demanded by the economy.

21. The World Bank is well placed to help West and Central African countries fill skills and knowledge needs through a systematic, targeted, and regional capacity building project with a longer term vision. First, the Bank currently supports four governments in the region in higher education. This gives an opportunity to integrate regional aspects into national programs, provide direct access for policy dialogue, and implementation support on the ground. Second, through its medium-term program for higher education, substantial expertise on financing, government and employability has been built up within higher education throughout Africa and can draw upon lessons from reform experiences in Latin America, and South and East Asia. Third, the Bank can pull together a cross-sectoral team with knowledge of specialized sector skill shortages and contacts with sector partners and companies. With this knowledge and cross-sectoral team, the Bank has developed a model to integrate an education program with regional and national sector programs within agriculture, health, water, and extractive industries. Fourth, the Bank has a mandate from the African Union and collaborates with ECOWAS and WAEMU, among others, to support initiatives towards regional integration, and has harvested a number of lessons from regional projects in other sectors that have benefited the design of this project. Lastly, the Bank is collaborating with traditional bilateral development partners (DPs) as well as new governmental and non-governmental development partners within this project.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

22. The Project Development Objective (PDO) is to support the Recipients to promote regional specialization among participating universities in areas that address regional challenges and strengthen the capacities of these universities to deliver quality training and applied research.

Project Beneficiaries

23. **The IDA credit beneficiaries are:**

- (i) Students in supported institutions and their partner institutions from across West and Central Africa who will benefit from quality research-based education in high demand areas;
- (ii) Companies, governmental and non-governmental organizations that partner with the Africa Centers of Excellence (ACEs) that will gain from more interns and graduates who are trained in more relevant areas and from more relevant applied research to their business;
- (iii) Faculty and staff in the ACE who benefit from improved teaching and research conditions; and
- (iv) Faculty and students in regional partner institutions who benefit from improved capacity of the ACE.

PDO Level Results Indicators

24. The following PDO indicators will measure progress towards achieving the PDO:

- (i) Number of national and regional students enrolled in new specialized short-term courses, and Master and PhD programs (measures strengthened capacities)
- (ii) Number of regional students enrolled in new specialized short-term courses, and Master and PhD programs (Regional aspect)
- (iii) Number of internationally accredited education programs (Training quality)
- (iv) Number of students and faculty with at least 1 month internship in companies or institutions relevant to their field (Training quality and addressing challenges)
- (v) Amount of externally generated revenue by the ACEs (Training and research quality)

III. PROJECT DESCRIPTION

25. **The project consists of two components.** Component 1 will aim to strengthen the capacity of 19 competitively selected institutions to strengthen or establish ACEs. These ACEs will deliver regional, demanded, quality training and applied research in partnerships with regional and international academic institutions and in partnership with relevant employers and industry. Component 2 consists of regional activities to build capacity, support project implementation, monitor and evaluate, and develop regional policies. Further, component 2 will, in a novel and demand-driven way, boost regional collaboration by supporting The Gambia in

strengthening its higher education institutions through education services purchased from the ACEs strengthened under Component 1.

A. Project Components

Component 1: Strengthening Africa Centers of Excellence – (Total costs including contingencies: US\$281.6 million, of which IDA US\$140.8 million)

26. **Component 1 will strengthen 19 Centers of Excellence in selected higher education institutions to produce highly skilled graduates and applied research to help address specific regional development challenges.** Centers of Excellence draw on specialized departments and faculty in higher education institutions (universities) in West and Central African countries in disciplines related to STEM, Agriculture and Health. The number of ACEs per country and sector supported and strengthened under this component is shown in Table 2. The maximum grant amount awarded to each Centre of Excellence is US\$ 8 million.

Table 2: Africa Centers of Excellence by country, field and development challenge

	S.T.E.M.	Agriculture	Health
Benin	1 (Applied Mathematics)		
Burkina Faso	1 (Environment and Water Engineering with agro-business elements)		
Cameroon	1 (Application of Information Technology)		
Ghana	1 (Water and Environmental Engineering and Sciences)	1 (Crop science and plant breeders)	1 (Cell biology of infectious diseases)
Nigeria*	3 (Material Sciences and petroleum engineering; Oil Chemical Engineering and Sciences; Science and technology transfer)	3 (Agriculture and environment sciences, Dry-land Agriculture, Food technology)	4 (Neglected Tropical Diseases, Phytomedicine Science; Infectious Diseases pathologies; Reproductive Health)
Senegal	1 (Mathematics and ICT)		1 (Maternal and Child Health)
Togo		1 (Poultry sciences)	
Total Number	8	5	6

* 3 ACEs in Nigeria will be financed purely from the national IDA envelope of Government of Nigeria.

27. **The beneficiary institutions were selected through an open, rigorous, transparent and merit-based selection process.** The selection process entailed the following main steps: (i) call for proposals to institutions; (ii) submission of Center of Excellence proposals through their respective governments to the regional facilitation unit (52 proposals were submitted); and (iii) a systematic and detailed evaluation of proposals by 35 independent African and international experts according to pre-defined criteria. The evaluation consisted of three different and discrete sets of assessments. The universities that submitted the 31 proposals that met the required level of education and academic quality, as assessed by three independent academic experts, were further assessed through an on-site leadership evaluation and a fiduciary assessment. Each shortlisted proposal was reviewed and scored by at least seven independent evaluators; (iv) as a last step, the regional ACE SC selected 15 proposals by first selecting the highest evaluated

proposal from each country that submitted proposals, and, second, the highest evaluated proposals within each of the three disciplines (up to a maximum of four proposals) were selected for each discipline, and finally, out of the remaining proposals, the three highest evaluated proposals were irrespective of country and discipline were selected. The selection mechanism sought to ensure a reasonably equitable distribution across countries, language groups and disciplines. Annex 2 provides more details on the evaluation and selection process.

28. Selected institutions will implement their own Center of Excellence proposal aiming to help address a specific regional development challenge through preparation of professionals (education), applied research and associated outreach activities with partners. Each selected institution will sign a performance and funding contract with their government which states the following: At least 15 percent of the funding must be invested in the partnerships, and at least 10 percent must be invested in partnerships activities with non-national African partners. A partnership agreement between the ACEs and their respective partners will detail the work plan, budgets and outcomes of this arrangement. Further, civil works will be limited to 25 percent of the grant. This agreement will include the government's planned commitments for continued funding of institutional staff as part of the funding and performance agreement. Within these parameters, institutions will have autonomy to implement their own institutional specific proposal that encompasses the following six elements:

- *Enhance capacity to deliver regional high quality training to address the development challenge*, including, *inter alia*, update curricula of existing programs or create new education programs to meet the development challenge; meet international benchmarks for quality education (e.g. international accreditation); deliver short-term courses for professionals; attract a regional student body; training of faculty to introduce new approaches to teaching and learning; enhance work-place learning such as internships; encourage entrepreneurship among students, upgrading of qualifications of faculty; improve learning resources, including lab equipment, and minor rehabilitation or extension of existing facilities.
- *Enhance capacity to deliver applied research to address the regional development challenge*, including, *inter alia*, faculty development and staff training, minor rehabilitation works or extension of existing facilities, scholarships and post-doctoral studies, networking activities with national and international partners, hosting and participating in conferences, research equipment and materials and laboratory refurbishment, research dissemination, knowledge and technology transfer, and patenting or other intellectual property rights-related costs.
- *Build and use industry/sector partnerships* to enhance impact of the ACE on development and increase relevance of said centers education and research, including, *inter alia*, industry advisory boards, internships, industry lectures, training of trainers for sector training institutions (such as polytechnics, nursing, teacher or agricultural colleges), joint research, training, and other activities to communicate, interact and reach out to the civil society, the private sector, and grassroots communities.
- *Build and strengthen regional and international academic partnerships* to raise quality of education, raise the capacity of network partners and to raise the ACE's capacity, including, *inter alia*, joint delivery of education programs, professional courses for regional faculty, faculty exchanges/visiting faculty, joint research, joint conferences, sharing of specialized equipment and library resources

- *Enhance governance and management of the ACE and the participating university to improve monitoring and evaluation, including monitoring of labor market outcomes of graduates, administration, fiduciary management (including financial management (FM), procurement, oversight and capacity), transparency, ability to generate resources, and project implementation.*

Component 2: Enhancing Regional Capacity, Evaluation and Collaboration – (Total cost including contingencies: US\$9.2 million, of which IDA US\$9.2 million)

29. **Component 2.1 Enhancing Regional Capacity and Evaluation – (Total costs, including contingencies - US\$5.0 million).** This sub-component will be financed through a Regional IDA Grant to the Association of African Universities (AAU). The AAU will support: (i) capacity building, knowledge sharing and coordination between the ACEs, for example through joint lessons learning as well as implementation of a communications plan; (ii) undertake regional monitoring and evaluation (M&E) activities to improve and assess the performance of the selected institutions. This includes tracer studies, technical audits, collection of academic data, and topic-wise evaluations; (iii) technical assistance to regional bodies, including ECOWAS and WAEMU to support regional policy making on regional higher education science and technology agenda; and (iv) activities required for regional project facilitation and steering.

30. **Component 2.2 Project Facilitation in Nigeria – (Total cost, including contingencies US\$1.2 million).** This sub-component will finance project implementation support and facilitation for the National Universities Commission in Nigeria. This includes national facilitation, training, and supervision in fiduciary aspects as well as national M&E and minor TA.

31. **Component 2.3 Enhancing Demand-driven Regional Education Services in The Gambia – (Total costs, including contingencies US\$3 million).** This sub-component is financed through a Regional IDA Credit of US\$2 million and National IDA Grant of US\$1 million. It seeks to increase regional use and benefit from the strengthened ACEs under Component 1 in a demand-driven manner. The sub-component will finance provision of higher education services to The Gambia's students, faculty and civil servants. The education services could include short-term specialized training to government officials, short-term merit-based scholarships to young talent, faculty development for non-ACE institutions, visiting faculty, and curriculum development. The Gambia will contract the ACEs to deliver the demanded services.

B. Lending Instrument

32. **Investment Project Financing (IPF) credits and grants will finance the project activities, and will be disbursed based upon achievement of disbursement-linked indicators (DLIs) for Component 1, and based upon statements of expenditure (SOE) for Component 2.** A results-based financing approach will be used in Component 1, since it increases the client's and the Bank's focus on delivery of results. This project will be the first project to apply the DLI approach to a regional project. The DLI approach within an IPF has been tried for over five years in the education sector, including in the participating countries, with good results yielding key lessons, notably to be prudent when estimating implementation capacity and time for results; focus on results that are within the control of the implementing agencies, and specify a clear verification protocol. The Program for Results (P4R) instrument was not pursued given that it is

untested in the education sector as well as having not been tested in any of the eight participating countries. Therefore, the P4R instrument would have prolonged substantially the preparation time and increased the level of risk.

33. **Component 1** is designed as a government program to which the World Bank contributes funding. The ACE project uses government and institutional budgets, agreed rules and emphasizes the strengthening of governmental and institutional oversight for its implementation. The program consists of funding to the universities' academic, technical, and administrative staff, other operational costs, and investments into goods, training, services and limited civil works. The World Bank finances an agreed amount of this program if the results are achieved and the agreed fiduciary and safeguards rules and standards are followed. The financing contribution of the governments and institutions will be the value of the estimated salaries and operational costs for the implementation of the ACEs. The amount of credit disbursements will be contingent on the satisfactory achievement of agreed, pre-specified program implementation progress and performance results, referred to as DLIs and presented in Table 2 in Annex 1. The most important DLI is the education and research results achieved in the form of increased number of regional students, reaching education quality benchmarks, published research, number of internships and external revenue generation. There are also two DLIs for quality, efficient and timely procurement and FM. Each DLI has a unit disbursement price per unit of result achieved. The reporting and verification of the achievement of the DLIs will be done semi-annually and disbursed accordingly. DLIs are priced based on consultation and figures of university achievements. An advance of up to 10 percent of the credit amount will be made available in order to avoid delays in implementation due to low liquidity. Credit disbursements for Component 1 will reimburse the government for selected budget lines financing the ACE project. The selected budget lines are referred to as Eligible Expenditure Programs (EEPs). The specific EEPs will be determined on a country-by-country case, and includes faculty salaries and operation costs. These expenditures must be procured and managed in manners satisfactory to the Bank in order to be eligible for reimbursement from the World Bank. This approach is described in details in Annex 3 under Financial Management and Disbursements.

34. **For Component 2**, credit disbursement will be based upon statement of expenditures.

35. **The project meets the four regional criteria for utilizing the regional IDA envelope:**

(i) **Involves three or more countries:** The project involves eight countries: Benin, Burkina Faso, Cameroon, Ghana, Nigeria, Senegal, The Gambia, and Togo.

(ii) **Has benefits, either economic or social, that spill over country boundaries:**

- Benefits of economies of scale and economic growth obtained through regional specialization. Regional specialization is the most economical and cost-efficient way that African countries can develop and sustain high quality universities within specific disciplines that address skills shortages and meet development needs of the region. High quality higher education is expensive to attain in S&T disciplines, and excellence in multiple fields is not easily achieved at the national level given the high costs of maintaining quality universities, and limited availability of critical mass of high quality faculty. For instance, if all countries in West and Central Africa attempted to create a center of excellence in the oil and gas sector, both faculty and resources would be spread thin over countries, there would be unnecessary duplication of investments with similar educational goals. The argument is similar in other sectors, such as health and agriculture.

- The research results generated by the ACEs are a classical regional public good. The knowledge from applied research will be applicable to the entire region given that only ACEs focusing on regional development challenges will be funded and can be used infinitely at the same costs (non-rivalrous).
- (iii) **Confirms strong interest from regional bodies and the region's countries in the project.** ECOWAS seeks to use this project as a vehicle for further collaboration within S&T and harmonization of higher education policies.
- (iv) **Provides a platform for a high level of policy harmonization between countries** through an investment program to promote specialization of higher education in the region. This is supporting not only the mission of ECOWAS but also the implementation of the ECOWAS Protocol on higher education and the ECOWAS Science and Technology policy, supporting overall policy development within higher education in West and Central Africa. The project also supports regional collaboration and specialization among universities in the WAEMU area as well as policy harmonization within higher education. Further, the AAU will host the project's Regional Facilitation Unit (RFU) and be strengthened through the project.

36. **IDA allocations will follow the standard practice for regional projects** with up to two-thirds of the IDA amount of the project from the regional pool of IDA and one third (1/3) from the national allocation. Table 3 presents the project costs by country with the regional and national IDA breakdown.

Table 3 Project Cost and Financing (in US\$ million)

Project Component	Project cost	Total IDA	National IDA	Regional IDA	% IDA Financing
Component 1: Strengthening Africa Centers of Excellence					
Burkina Faso (1 ACE)	16.0	8.0	2.7	5.3	50%
Benin (1 ACE)	16.0	8.0	2.7	5.3	
Cameroon (1 ACE)	16.0	8.0	2.7	5.3	
Ghana (3 ACEs)	48.0	24.0	8.0	16.0	
Nigeria with Regional IDA (7 ACEs)	96.0	48.0	16.1	31.9	
Nigeria with only National IDA (3 ACEs)	41.6	20.8	20.8	-	
Senegal (2 ACEs)	32.0	16.0	5.3	10.7	
Togo (1 ACE)	16.0	8.0	2.7	5.3	
Total Component 1	281.6	140.8	60.9	79.9	50%
Component 2: Enhancing Regional Capacity, Evaluation and Collaboration					
2.1 Regional Capacity Building, M&E, and facilitation	5.0	5.0	-	5.0	100%
2.2 Project Facilitation in Nigeria	1.2	1.2	1.2		
2.3 Demand-driven regional services – The Gambia	3.0	3.0	1.0	2.0	
Total Component 2	9.2	9.2	2.2	7.0	100%
Total Financing Required	290.8	150.0	63.1	86.9	52%

Note: The countries' contribution to the project cost is the estimated amount required for the salaries of the staff of the ACEs and other university personnel.

37. **Retroactive Financing.** For Benin, Burkina Faso, Cameroon, and Togo, there will be retroactive financing up to 10 percent of the IDA financing. Therefore, for these countries no withdrawal shall be made for payments made prior to the signing of the financing agreement, except that withdrawals up to an aggregate amount not to exceed SDR 520,000 for Burkina Faso Cameroon and Togo, and SDR 530,000 for Benin, may be made for payments made twelve months prior the signing of the financing agreement for the Eligible Expenditure Programs.

38. **Other countries have expressed interest in participating and the project could be scaled up.** Additional West and Central African governments have expressed interest in participating in the project either under Component 1 or Component 2. Consequently, subject to implementation progress and availability of IDA, the project could be scaled up. Further, countries and institutions in Eastern and Southern Africa as well as the East African Commission have expressed interest in a second phase of the ACE project for Eastern and Southern Africa. Lastly, several DPs are considering parallel financing or co-financing of the proposals developed under this project.

C. Lessons Learned and Reflected in the Project Design

39. **Key lessons on regional collaboration in higher education in SSA and globally.** A report of the global experience with regional collaboration commissioned for this project emphasized the following lessons: Regional initiatives are most successful when one of the partners takes a lead in hosting. Furthermore, a successful regional initiative requires quality management, funding arrangements, and governance structures that are clear and recognized as legitimate by all partners. Partnerships have to be formed voluntarily with the mutual benefits identified. The structure and modus operandi of a successful regional initiative also has to overcome the perception that it would negatively impact existing national institutions by diverting resources away from them to the regional center. In Africa, language and geographical spread are additional important factors that shape regional collaboration in higher education.

40. **Key lessons from higher education projects shaping this project:** (i) a bottom-up approach based upon institutions preparing their own proposals, but requiring alignment with national and regional development challenges and industry partners, which also seeks to increase ownership and implementation capacity; (ii) competitive, merit-based, transparent, and detailed selection process is the gold-standard for higher education funding; (iii) performance contracts (including flexibility to re-allocate funding from low-performers to high performers) ensure a continuous focus on the results during implementation; (iv) a focus on institutional leadership as well as administrative and implementation capacity from the on-set as part of the evaluation and capacity building, and (v) enhancing institutional autonomy to make decisions, for example financial decisions, is important.

41. **Key lessons from design and implementation of Regional projects** – (i) simplicity. A number of desirable, but not top-priority activities have been removed from the project since project concept, (ii) start in manageable-sized projects. This project has been substantially reduced in scope from an initial continental-wide scope to a focus on West and Central Africa with a planned sequel for Eastern and Southern Africa; and a reduced IDA funding envelope from US\$ 300 million to US\$ 150 million; (iii) ensure common regional interest in the project, which is now available from regional bodies and countries; (iv) attention to project implementation capacity and practical detailed implementation arrangements, notably identification of possible problems in the interface between national and regional arrangements;

and (v) appropriate allocation of resources for preparation and supervision due to the higher costs associated with regional programs.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

42. **Each selected institution will implement its own ACE sub-project.** An ACE implementation team has been established to run the day-to-day management of the project and provide secretariat services to the National Review Committee. It is led by a Center Leader (CL) who is a recognized educator/researcher within the primary discipline of the ACE and supported by senior faculty from the relevant engaged departments. Further, administrative capacity, most often from the institutions' central administration will assist with the fiduciary tasks. Partners, including international academics, are often represented in an advisory committee. The paragraph below provides one typical example. Each ACE will sign a partnership agreement with its partners laying out the agreed partner activities for the project, and an annual workplan will be agreed upon yearly.

43. **One example is the implementation arrangements for the Africa Center of Excellence for Neglected Tropical Diseases (NTD) and Forensic Biotechnology, Ahmadu Bello University (ABU), Nigeria.** The ACE will be headed by the CL, who will be in charge of the day-to-day running of the Center and will be assisted by the deputy Center Leader. The CL is based in the Center's Management Office (CMO), also home to three leaders representing the three research units working on NTDs and the capacity building unit. They will be responsible for the management of the technically, scientific, and reporting aspects of their specific units. The ACE will operate semi-autonomous within the general structure of ABU in terms of day-to-day administration and FM. Several departments and faculty of ABU will contribute with complementary expertise in molecular research on selected NTDs to the research and training program of the ACE: Biochemistry, Biological Sciences, Veterinary Public Health & Preventive Medicine, Veterinary Medicine, Pharmaceuticals, Microbiology, Veterinary Parasitology and Entomology, and Pathology. The research, training and other academic activities of the Center will be planned and guided by a committee comprising representatives on each NTD and key partner institutions, and an international scientific advisory board comprised of high level international experts.

44. **Each government will constitute a National Review Committee through the ministry or agency responsible for higher education.** The Committee is tasked with a semi-annual review of performance, withdrawal applications, and implementation planning and support, but with no day-to-day implementation or approvals. This composition is defined by each country basis. For most countries, the Ministry/agency in charge of higher education will chair and convene the committee, and the committee will include members from Ministry of Finance, as well as relevant line ministries based on the focus area of the ACEs (e.g. agriculture, health, oil and gas etc.).

45. **A Regional Facilitation Unit will be responsible for regional activities financed through component 2.1.** A grant agreement between the World Bank and the AAU lays out the key activities of the RFU. Further, an annual workplan will be agreed between the World Bank, the ACEs, and the AAU, which details the AAU's expected work on capacity building, M&E, and

convening of ACE meetings, including steering committee meetings. The RFU in AAU relies upon existing staff and resources in AAU and add specific required staffing, including an ACE deputy project facilitator that will be the day-to-day responsible for project implementation.

46. **For Sub-component 2.2 project facilitation in Nigeria, a small project team in the National Universities Commission is in place.** This team facilitated the implementation of the Nigeria Science, Technology and Education Project (STEP B), and it has established practices for effectively working with the participating universities. It will be strengthened further in terms of its fiduciary capacity.

47. **Sub-Component 2.3 Demand-Driven Services for The Gambia will be coordinated by the Ministry of Higher Education, Research, Science and Technology (MoHERST) with the fiduciary tasks carried out by Project Coordination Unit (PCU) in the Ministry of Basic and Secondary Education.** The MoHERST will coordinate the capacity needs of The Gambian institutions, and work with the fiduciary unit to prepare bidding packages for education services for which the ACEs will submit proposals. A contract between the government and the selected ACE will be signed, and the ACE will deliver the services as per the agreed schedule. The PCU has the relevant procurement and FM capacity to prepare the service package and monitoring delivery has been appointed. The National Technical Committee shall provide oversight for the Project and hold semi-annual reviews of performance and implementation, with the Focal team in charge of the implementation, coordination, monitoring

48. **The ACE Steering Committee provides overall guidance and oversight for the project.** The steering committee includes representatives from each of the participating countries, recognized African and international academicians, sector representatives, and acknowledged civil society/private sector stakeholders.

49. **ECOWAS participates in the ACE SC** and will lead the policy studies and capacity building on regional mobility of skilled labor and policy coordination within higher education.

50. **African diaspora are heavily integrated into implementation.** A significant number of the academic evaluators of ACE proposals were researchers from the diaspora teaching and researcher in reputable institutions outside of Africa. Furthermore, several of the ACE CL are returnees from successful faculty careers in North America and Europe. The project will continue to involve this strong willingness to support African higher education and science and technology through consultancies, peer reviews and advisory committees.

51. **Project implementation equally draws heavily on a large number of international, regional and national partners to achieve academic and development objectives.** There is a strong willingness in Europe, Asia, and America to support African higher education. This project through the partnership funding and implementation arrangements seeks to provide a framework with accountability, clarity and large-scale investment to complement the tremendous potential of gains from academic exchange between African and other academics, both in terms of academic knowledge, but also in academic administration and teaching practices. To illustrate with an example the ACE for the West Africa Centre for Crop Improvement (WACCI) at University of Ghana partners with Directorate of Crop Services, Ministry of Food and Agriculture, Ladoke Akintola University of Technology, Nigeria, Institut National de la Recherche Agronomique du Niger, Institut d'Economie Rurale (IER), Mali within the Region, and outside of Africa with University of Cornell, US; Iowa State University, U.S. and Purdue

University, U.S. The project also has a partnership with Carnegie Corporation for capacity building, as well as government of Australia for technical support within skills for mining.

52. The Project will be implemented in accordance with institutional Project Implementation Plan that will comprise of Financial Management Manual, Procurement Manual and Plans that will be approved by the Bank at effectiveness. In addition, the Project Regional Operations Manual will guide the overall project and will be approved at negotiation stage

B. Results Monitoring and Evaluation

53. **The program design has a strong focus on M&E which is critical to ensuring the success of the disbursement linked indicators model.** Two sets of cascading Results Frameworks (RF) templates were established: (i) a standard RF template for each selected ACE to measure progress; as well as (ii) an overall RF, which aggregates all of the data provided by the ACEs, and also consists of additional indicators measuring the regional capacity building and facilitation activities. Both together measure progress of the project as a whole.

54. **The M&E will primarily be undertaken by each of the selected ACEs** through their existing data sources and tracking tools which will be fine-tuned specifically to the M&E reporting requirements of the project. The ACEs tools for M&E include: the RF and the M&E Plan. The additional review mechanisms of the ACEs RFs and their tracking tools will include the following: (a) institutional progress reports and internal quality and efficiency audit reports; (b) external verification by an independent third party which will verify achievement of results, some of which are vital as they relate to disbursements; (c) information regarding research publications and accreditations from internationally recognized bibliometric data bases and the accreditation agencies themselves; and (d) interactions with stakeholders, including students.

55. **In most instances, the data requirements and M&E capacity exist at the university level.** If the M&E capacity is not fully in place at the time of the signing of the performance agreement, an action plan will be detailed to build capacity. In addition, adequate on-the-job training on these aspects will be provided to the ACEs' M&E staff through the AAU, specifically in the first year of implementation.

56. **Regional-level responsibility, for aggregating the RF of the ACEs will be located at AAU.** In addition, a budget for survey-based collection of results and feedback will be provided under the project, as well as for M&E support and verification. Comprehensive progress reports will be provided to the Bank semi-annually.

C. Sustainability

57. **Human and physical capacity of the universities built by this project is sustainable in the medium term and will continue to benefit student learning for decades.** However, continuous upgrades in faculty qualification, curriculum and equipment require continued investments. These investments will depend upon the Institution's ability to generate and authority to retain its own revenue across financial years.

58. **The sustainability of the governance improvements, such as increased institutional autonomy, is highly likely to be sustainable.** These governance improvements empower institutions to overcome barriers in innovative and individual ways that the system in many cases cannot overcome for political reasons or lack of inertia.

59. **Ensuring sustainable financing for the continued excellence of the centers will be a challenge.** There is a strong level of commitment by governments to continue supporting higher education, but experiences show that the centers need to generate external resources for new investments into equipment, material and faculty development. Building capacity and practice to generate such funds, for example through consulting services and tuition fees, have received an important role in the project, notably through a DLI that will match externally generated revenue 1 to 1.

V. KEY RISKS AND MITIGATION MEASURES

A. Risk Ratings Summary Table

Risk Category	Rating
Stakeholder Risk	Substantial
Implementing Agency Risk	
- Capacity	Substantial
- Governance	Moderate
Project Risk	
- Design	Moderate
- Social and Environmental	Moderate
- Program and Donor	Moderate
- Delivery Monitoring and Sustainability	Substantial
- Other	Moderate
Overall Implementation Risk	Substantial

B. Overall Risk Rating Explanation

60. A comprehensive discussion on risk and mitigation measures during preparation and implementation is discussed in the ORAF (Annex 4). The following highlights the key risks:

61. **Overall implementation risk is Substantial due to the innovative and cross-country design of the project.** While the Center of Excellence model is well-tested in many contexts, the project is innovative and involves several “firsts” in an African context, including being the first results-based financing regional project. Further, the project involves eight countries and seeks to cuts across several sectors (education, health, agriculture, and extractives). Also, each Center of Excellence has several academic and industry partners. This complexity in delivery and monitoring risks slowing implementation. Furthermore, this implies complexity in project steering. Capacity risks are substantial due to: (i) the sometimes bureaucratic functioning of universities in the region and, (ii) insufficient experience with administration, M&E reporting, and procurement and FM experience. Finally, design risks such as results-based financing, expecting African education programs to reach international education standards, and reliance on partnerships for delivery of services are ambitious.

62. **Risk mitigation measures incorporated into the design, preparation and implementation of the project include the following:** (i) a project design with extensive involvement of a technical African working group and continuous workshops with universities. This has created ownership and tailoring the design to the West African context, (ii) a competitive selection process designed to identify and select the proposals that are best prepared, has the most qualified faculty, and most committed institutional and government leaders by an Independent Evaluation Committee (weeding out those universities not sufficiently committed, or those where capacity is too weak); (iii) links to institutional project arrangements of existing World Bank projects (where possible), (iv), hosting the RFU in a well-known and respected regional organization, the AAU, and providing extensive TA to support implementation as necessary (to support project facilitation) ; (v) provision of regular external monitoring of performance during implementation, and making necessary mid-course corrections as needed, and (vi) project effectiveness will not include cross-country or cross-institutional conditions. Nevertheless, the innovative nature of the project in the regional context implies that constant vigilance for implementation bottlenecks and a potential need for corrections of design could be required. Therefore, pro-active restructuring of the project may be necessary, and it should not be expected that every funded institutions will necessarily develop into an international recognized Center of Excellence.

VI. APPRAISAL SUMMARY

A. Economic and Financial Analyses

63. **The economic and financial analysis for the Africa Higher Education Centers of Excellence project presents the rationale for limited and targeted public investment in higher education and science and technology.** This includes the positive externalities of higher education graduates in the areas of agriculture, engineering, mathematics, science, and health; as well as market failures that prevent investment in higher education. The empirical results on the returns to higher education indicate that acquisition of higher education degrees is associated with higher earnings (returns are 2.4 percent for Burkina-Faso, 30 percent for Cameroon, 30 percent for Ghana, and 15 percent for Nigeria). The benefit-cost analysis of component 1, Strengthening Africa Centers of Excellence, show that the IRR closely follow the labor market returns. Specifically the Internal Rate of Return (IRR) is 3 percent in Burkina-Faso, 30 percent in Cameroon, 28 percent in Ghana, and 15 percent in Nigeria when calculated at national levels. The economic analysis equally provides case studies on the economic impacts that improved specialized skills and technology can have in the targeted sectors. Comprehensive analysis in this domain is not possible for a project, but case studies, for example in the extractives examples show that the lack of skills is the main reason for local supply industries not to develop, and hence a large share of the expenditures from the extractive industries is sourced from outside the country/region. In terms of financial analysis, the investment into the typical ACE will represent a small portion of the public expenditure on higher education; in a given year of the project, ACE expenditures will represent approximately 5.2 percent of Benin public expenditure in higher education, 2.9 percent of Burkina-Faso, 2.0 percent of Cameroon, and 0.4 percent of Ghana). The economic and financial analysis can be found in Annex 6.

B. Technical

64. **The technical design is based on globally-recognized approaches for building higher education excellence.** First, competitive funding of higher education is the main vehicle in high performing systems to achieve specific education goals, such as employability and scaling up of postgraduate education. The selection and implementation process incorporated the lessons from global competitive funds in higher education, and from science and engineering research funding programs in middle- and high-income countries. Second, the project seeks to lay a foundation for governance improvements in the governance of higher education systems, which is key for achieving transformation towards excellence within higher education. Third, the design focuses on the sciences-strengthening selected institutions to improve quality of STEM and applied research—key areas of economic development.

C. Financial Management

65. FM assessments were conducted for all the implementing entities of the Africa Higher Education Centers of Excellence Project that include the 15 ACEs under Component one and the RFU and the PCU at the Ministry of Basic and Secondary Education (MoBSE) in The Gambia under Component 2. The FM assessment was carried out in accordance with the Financial Management Manual issued by the Financial Management Sector Board on March 1, 2010. The details of the assessment are documented under Annex 3.

66. The key findings were that budgeting systems are generally in place in all the implementing entities. All implementing entities have adequate Financial Management Manuals except for Cheikh Anta Diop University, Senegal that needs to be updated to have provisions related to the project. Other ACEs where updates are required to strengthen accounting procedures relate to University of Yaounde I, Cameroon; University of d'Abomey-Calavi, Benin; and Université de Lomé, Togo. These FM Manuals will be complemented by an institutional level Implementation Plan that will have adequate FM provisions that have to be agreed with IDA by effectiveness. Accounting staff arrangements are satisfactory in all implementing institutions except University of Yaounde 1, Cameroon; University of Ghana, WACCI; and Cheikh Anta Diop University, Senegal. These will need to strengthen their capacity by acquiring an additional qualified and experienced accountant to manage the workload arising out of this project. Computerized accounting information systems are in place except that a number of ACEs (see Annex 3, Accounting Information Systems) will need to acquire new accounting information systems, upgrading current accounting software and build the capacity of the persons managing the systems. With regard to internal audits, there is a need to recruit internal audit staff in Cheikh Anta Diop University, Senegal; African University of Science and Technology, Nigeria; and Association of African Universities, in order for all implementing entities to have adequate staff. Internal auditors for most of the implementing entities will need to be trained in risk based auditing and performance (Value for Money) auditing. All implementing entities will need to have a functional audit committee except for Universities of Benin, Nigeria and Ghana that already have one. Governance and Anti-corruption arrangements that deal with anti-corruption and enhancing transparency and accountability by publishing budgets, financial reports and audited accounts. Disbursements under Component 1 will be results-based while under Component 2, they will be transaction based. Financial Reporting arrangements are generally adequate but formats of the reports will need to be agreed with all

implementing entities. External Audit arrangements are generally satisfactory but it was noted that University of Abomey-Calavi, Benin and University of Lomé, Togo had audited accounts backlogs related to 2012 and 2013 that need to be addressed. Further details are included in Annex 3.

67. The conclusion of the assessment was that the FM arrangements in place meet IDA minimum requirements under OP/BP10.02, and, therefore, are adequate to provide, with reasonable assurance, accurate and timely information on the status of the project required by IDA. However, the improvements described above are recommended. The overall FM residual risk rating of the Project is Substantial for component 1 and moderate for Component 2.

D. Procurement

General. Procurement activities under the ACE project will be implemented under Component 1 by each Center of Excellence and under Component 2 by the RFU hosted within the AAU (Component 2.1), National Universities Commission, and Nigeria (Component 2.2) and by a project unit in the Ministry of Basic and Secondary Education in the Government of The Gambia (Component 2.3). All activities to be supported under the project will adhere to the World Bank “Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants, dated October 2006 and revised in January 2011”.

68. **For Component 1**, which has a DLI approach, all expenditures to be reimbursed under the project will be part of the Eligible Expenditure Program. All expenditures for procurable items in the EEP will follow the World Bank “Guidelines for Procurement of Goods, Works and Non-Consulting Services”, dated January 2011 or the World Bank “Guidelines: Selection and Employment of Consultants”, dated January 2011, with procurement plans acceptable to IDA. Expenditures entirely financed by other financing sources, including government funding, can follow national procurement guidelines. Each ACE will prepare a procurement manual with the relevant World Bank and national procurement system procedures for goods, consisting mainly of laboratory and related equipment, as well as for works, consisting mainly of rehabilitation of classrooms and laboratories. Consultant services will also be undertaken mainly for example technical assistance, preparation of manuals, specialized reports, financial and procurement audits, and other assignments.

69. **For Component 2**, the RFU at AAU, the National Universities Commission, Nigeria and the implementation team in The Gambia will use the World Bank “Guidelines: Procurement of Goods, Works and Non-Consulting Services”, dated January 2011 or the World Bank “Guidelines: Selection and Employment of Consultants”, dated January 2011, with procurement plans acceptable to IDA. The RFU at AAU and National Universities Commission, Nigeria will procure both goods and consultant services, such as computer equipment and simple consultant contracts (works contracts are excluded), while The Gambia will procure consultant services only from the other participating ACEs, and also will procure goods when justified (works contracts are excluded). As this is a regional services and collaboration project, the appraisal process advertised national and internationally to attract candidate ACEs and 52 applications were received. Following the evaluations that took place between September and October 2013, 19 ACEs were selected after this rigorous and competitive process. Within this pool of ACEs there is expertise in health (6 ACEs), agriculture (5 ACEs) and STEM (8 ACEs). The Gambia

will have a further competitive consultant selection process among these ACEs, with invitations to short lists from these high quality service providers.

70. The overall procurement risk for the project is considered to be moderate to substantial before implementation of mitigation measures.

71. Under Component 1, a two-step process was undertaken to assess the procurement capacity among the 31 shortlisted candidate ACEs. In the first step, procurement capacity assessment criteria were included in the evaluation criteria to ensure that a basic minimum framework for procurement processes was in place at each ACE, and this constituted along with FM, five per cent of the scoring weighting system. At the second step during appraisal an individual procurement assessment was carried out for each of the 19 ACE entities, to identify the procurement risks for project implementation, and also the recommended mitigation and strengthening measures, which are detailed in Annex 3. The methodology used follows international practice and the standard approach of the Bank's Procurement Risk Assessment and Management System (P-RAMS), and a summary of the results are presented in Annex 3. Based on these risk assessments and on previous experience in similar projects at higher education institutions, procurement capacity strengthening is planned for timely implementation of procurement plans. There will be focused attention to clear technical specifications, and timely commitment of funds is needed towards approved procurement packages. The project will provide implementation support to the selected ACE institutions to assist in addressing the mitigation measures identified. This implementation support for ACE institutions would be augmented by both existing implementation units responsible for procurement in related education sector projects financed by the World Bank, with the RFU at AAU called upon to organize and finance capacity building at the regional level, and National Universities Commission organizing procurement strengthening within Nigeria.

72. With regards to Component 2, the procurement risk assessments were also completed for the RFU hosted within AAU, for National Universities Commission, Nigeria and for the project management unit in The Gambia. Similar mitigation measures are also proposed for these three institutions and the details on the risks and associated mitigation measures are given in Annex 3. It is expected that the regional component under AAU and in the National Universities Commission, Nigeria will also support TA and capacity strengthening to address common complex procurement issues. This could also include preparation of curriculum and modules for mainstreaming of procurement course(s) at the higher education level.

E. Social (including Safeguards)

73. The project preparation phase included extensive consultations with an advisory working group comprising of higher education and science disciplinary experts that provided conceptual input and guidance on the project preparation. Consultative workshops and follow-up audio-conferences with the advisory working group were held across the continent with participation from African universities, science organizations, regional governmental bodies as well as interested development partners.

F. Environment (including Safeguards)

74. **Environmental impacts are expected to be low to moderate.** The Environmental Assessment category is B (Partial Assessment), and Environmental Assessment (OP/BP 4.01) will be triggered. There will be some rehabilitation and extensions of the selected institutions. There will be no new land acquisition for the Centers of Excellence; the project will select existing institutions. In general, the project will focus on quality enhancements of the Centers of Excellence, which primarily requires "softer items" i.e. faculty and curriculum development, and learning resources, while construction will be capped at maximum 25 percent of the funding, and the rationale for proposed new construction will be scrutinized to ensure such construction is critical for excellence. This clear rule on the maximum extent of civil works allowed under the project will be established in the Project Regional Operations Manual and the subsidiary agreements between the governments and the universities. Further, ESMPs have been prepared and disclosed for each candidate institution to manage environmental and social impacts based on the submitted proposals. For in some cases (3 out of the 15 regionally-funded Centers), the civil works are so minor and localized that they can be guided by national and local laws and procedures, and therefore no ESMP has been developed. The prepared ESMPs were disclosed in country on February 3, 2014 and in the infoshop on January 28, 2014. Prior to the decision meeting, a general set of best practice guidelines for environmental and social management was disclosed in the region.

Annex 1: Results Framework and Monitoring

Africa Higher Education Centers of Excellence Project (P126974)

Results Framework

Project Development Objectives

PDO Statement

The Project Development Objective is to support the Recipients to promote regional specialization among participating universities in areas that address regional challenges by strengthening the capacities of these universities to deliver quality training and applied research.

These results are at Project Level

Project Development Objective Indicators

Indicator Name	Core	Unit of Measure	Baseline	Cumulative Target Values					Frequency	Data Source/ Methodology	Responsibility for Data Collection
				YR1	YR2	YR3	YR4	End Target			
No. of national and regional students enrolled in new specialized short-term courses, and Master and PhD programs	<input type="checkbox"/>	Number	1580.00	4100.00	7400.00	9500.00	12,000	15600.00	Bi-annually	ACE Enrolment records	AAU based upon data submitted by ACEs
No. of regional students enrolled in new specialized short-term courses, and Master and PhD	<input type="checkbox"/>	Number Sub-Type Breakdown	987.00	2250.00	4100.00	5300.00	7,600	8900.00	Bi-annually	ACEs' enrolment records	AAU based upon data submitted by each ACE - verified on a sample basis

programs											
No. of internationally accredited education programs	<input type="checkbox"/>	Number	3.00	5.00	7.00	10.00	12.00	15.00	Bi-annually	ACEs records of certificates/reports of international accreditation or evaluation bodies	AAU based upon data submitted by each ACE
No. of students and faculty with at least 1 month internship in companies or institutions relevant to their field.	<input type="checkbox"/>	Number	1037.00	1700.00	2700.00	4300.00	51,00.00	5900.00	Bi-annually	ACE Records	AAU based on data submitted by ACEs
Amount of externally generated revenue by the ACEs.	<input type="checkbox"/>	Amount(USD)	976877.00	2000000.00	3500000.00	5000000.00	6500000	8000000.00	Bi-annually	Financial Statements from individual ACEs	AAU based on data submitted by each ACE

Intermediate Results Indicators

Indicator Name	Core	Unit of Measure	Baseline	Cumulative Target Values					Frequency	Data Source/ Methodology	Responsibility for Data Collection
				YR1	YR2	YR3	YR4	End Target			
No of female students enrolled in new specialized Master, PhD,	<input type="checkbox"/>	Number Sub-Type Breakdown	311	700	1450	2000	2650	3300	Bi-Annually	ACEs enrollment records	AAU based on data submitted by ACEs

post-grad, and short-term courses/ programs											
No of faculty with at least 1 month outreach in companies or institutions relevant to their field.	<input type="checkbox"/>	Number Sub-Type Breakdown	23.00	60.00	100.00	170.00	145.00	240.00	Bi-Annually	ACE Records	AAU based on data submitted by each ACE
No of faculty trained by the ACEs	<input type="checkbox"/>	Number	100.00	300.00	500.00	700.00	800.00	900.00	Bi-annually	ACEs Records	AAU based on data submitted by the ACEs
Number of regional faculty trained by the ACEs	<input type="checkbox"/>	Number Sub-Type Breakdown	27.00	100.00	180.00	260.00	295.00	335.00	Bi-Annually	ACEs Records	AAU based upon data submitted by each ACE
Number of regional faculty trained by the ACEs	<input type="checkbox"/>	Number Sub-Type Breakdown	27.00	100.00	180.00	260.00	300.00	335.00	Bi-Annually	ACE Records	AAU based on data submitted by the ACEs
No of national faculty trained by the ACEs	<input type="checkbox"/>	Number Sub-Type Breakdown	73.00	200.00	320.00	440.00	500.00	565.00	Bi-annually	ACE Records	AAU based upon data submitted by the ACEs
No of newly established or revised curricula (meeting labor market skills), as approved by the appropriate institutional	<input type="checkbox"/>	Number	0.00	15.00	30.00	45.00	53.00	60.00	Bi-annually	ACE records	AAU based upon data submitted by each ACE

organ.											
Increase of internationally recognized research publications in disciplines supported by the ACE-Programme	<input type="checkbox"/>	Percentage	1098.00	1150.00	1207.00	1268.00	1300.00	1331.00	Bi-annually	International bibliometric databses (from Scopus by Elsevier)	AAU
No. of partnership agreements between ACEs and engaged partner institutions	<input type="checkbox"/>	Number	48.00	100.00	150.00	170.00	170.00	170.00	Bi-annually	Information from MoUs submitted by ACEs to RFU	AAU based on data submitted by each ACE
ACE project implementation team meetings with openly disclosed minutes	<input type="checkbox"/>	Number	0.00	30.00	60.00	90.00	105.00	120.00	Bi-annually	ACEs records and website	AAU based on data submitted by ACEs
Annual disclosed unqualified external financial audit with the ACE annual budget (planned and executed).	<input type="checkbox"/>	Number	0.00	7.00	15.00	25.00	30.00	37.00	Annually	ACE Audit Reports together with managerial letters and ACE website	AAU with data submitted from ACEs
RFU holding regular meetings with at least 15 ACEs participating	<input type="checkbox"/>	Number	0.00	2.00	4.00	6.00		8.00	Bi-annually	Record and minutes of RFU/ACE meetings	AAU

Level of satisfaction of ACE and ACE Steering Committee on quality of support provided by the Regional Facilitation Unit (AAU).	<input type="checkbox"/>	Percentage	0.00	50.00	60.00	70.00	72.500	75.00	Annually	Questionnaire feedback from ACEs and SC	AAU
No of ACE-Institutions reporting on at least 85% of their indicators, submitting the RF to the AAU in time.	<input type="checkbox"/>	Number	0.00	8.00	10.00	12.00	15	19.00	Bi-annually	ACE RF Submission reports	AAU
Annual program report prepared and submitted to WB	<input type="checkbox"/>	Text	N/A	Done	Done	Done	Done	Done	Annually	Annual reports from individual ACEs	AAU based upon data collected by each ACE
Direct Project Beneficiaries	<input checked="" type="checkbox"/>	Number	1950.00	4400.00	7900.00	10200.00	12800.00	16690.00	Bi-annually	ACE Records	AAU based upon data submitted by the ACEs
Female beneficiaries	<input checked="" type="checkbox"/>	Number	332.00	786.00	1598.00	2211.00	2884.00	3606.00	Bi-annually	ACE Records	AAU based upon data submitted by the ACEs

*Please indicate whether the indicator is a Core Sector Indicator (see further <http://coreindicators>)

Project Development Objective Indicators

Indicator Name	Description (indicator definition etc.)
No of regional and national students enrolled in new specialized Master, PhD, post-grad, post-doc and/or short-term courses/ programs [% of which are females]	<p>This indicator focuses on measuring the → Regionality of the program. Notes:</p> <ul style="list-style-type: none"> - The term 'regional' in this results framework always refers to African students who are not from the country hosting the particular ACE. - Master and PhD Students will have to be completed at least one semester to be included. With universities with strike for over the semester, the If a PhD student drops out, he/she must be replaced with a new student before another PhD students can be counted. A university can only count a student once in the student indicators, ie a Master student cannot also count as a short term student. Exchange/visiting students will count as long as they are studying full time at the ACE for at least one semester. On-line students are included, but will be discounted by 50% for the DLI disbursements. In case of protracted strikes or other forms of significant interruptions of classes during the semester, the Bank reserves the right to request further information and/or carry out an evaluation whether the new students have completed a full semester. - Data for each of the different levels is to be broken down in the comment/details section when reporting, and reflected in the progress reports. - Target numbers with respect to females might vary depending on the engaged sectors (e.g: extractive industries vis a vis health).
No. of internationally (regionally/sub-regionally) accredited education programs	<p>This indicator focuses on measuring the → Training Quality of the program. Notes:</p> <ul style="list-style-type: none"> - Data should give the accumulated number: internationally accredited including regional and sub-regional accreditation, and indicate the specifics (no per each level, also naming the accrediting institution). - Internationally accreditation by a recognized accrediting body – (satisfactory to the World Bank).
No. of Students /faculty with at least 1 month internship in a private sector company or an institution relevant to their field/ sector	<p>This indicator focuses on measuring the → Outreach of the program. Notes: - ACEs to:</p> <ul style="list-style-type: none"> (i) provide differentiated, disaggregated data on (a) students vis a vis faculty; and (b) on students and faculty from ACEs vis a vis from other (academic) Partner Institutions; (ii) ACEs to establish a database tracking all related information to show evidence with respect to names/titles/professional area of exchange students/ staff, locations/ institutions/departments where placed, as well as full contact information of the institution/ organization, timing of placements, and final evaluation reports from students/faculty on lessons learnt during the placements and suggestions for adjusting curricula of their home institution to capture relevant aspects due to their experience (with the purpose to making curricula relevant for labor market needs).

Amount of externally generated revenue by the ACEs.	Externally generated revenue deposited into the ACE's account from tuition fees, other student fees, sale of consultancies, joint research, fund raising and donations, or other external sources. These funds are for investment and operation of the ACE. Excluding all government education and research subventions, including research grants (sale of consultancy work to the government is accepted as externally generated revenue). Funds from other governments, including donor assistance, are discounted by half with the justification that such funding is not a long term source of funding. Externally generated funds from other donors/development partners is capped at 50% of the maximum to be disbursed.
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Intermediate Results Indicators

Indicator Name	Description (indicator definition etc.)
No of faculty trained in an area relevant to the ACE-Program, through training carried out or organized through the ACEs.	This indicator focuses on measuring the → Training Quality of the program. Notes: - ACEs to provide additional disaggregated data for % split between (a) faculty from ACEs trained vs. (b) faculty from Partner Institutions vs (c) faculty from the region trained.
No of newly established or substantially revised curricula.	The ACEs and PIs would establish a database with both the original curricula and the substantially revised curricula. The curricula must have been approved by the appropriate institutional organ. Further an advisory report/note from external reviewers (relevant industry professionals, employers and academics) should be included in this database to ensure curricula meet labor market needs for the labor market.
Increase of internationally recognized research publications in disciplines supported by the ACE-Program (in %).	This indicator focuses on measuring the → Research Quantity and Quality of the program. Notes: - Data collected by ACEs to track progress on targets for this indicator, will also be tracked by the AAU bi-annually, via a web-based implementation survey.
% of non-national students studying long term (at least 1 semester/ term) in ACEs	Notes: This indicator focuses on measuring the → Regionality of the program. The students have to be studying in a program included under the ACE-Program.
No of partnership agreements between ACE and partner institutions	This indicator focuses on measuring the → Outreach/ Regionality of the program. Notes: - Partnership Agreements must follow the guidelines on 'Partnership Agreements' outlined in the Project Regional Operations Manual. Examples should be giving in more detail in the progress reports, proving relevance, quality and significance of the agreements as well as of following joint projects and concrete collaboration. - Signed by academic leaders from ACEs and engaged Partner Institutions.

	- As part of the first proposal to be submitted, an agreement that the ACEs and PIs will partner around the program outlining the main areas of cooperation/ partnering with broad responsibilities will be required – this can, however, be an annex to existing MoUs. Once selected, ACEs and their PIs will need to provide more detail during the ‘proposal improvement’ phase.
Regular ACE Board Mtg.’s taking place with openly disclosed minutes (No of).	This indicator focuses on measuring the → Admin. /Governance Quality of the program. Notes: - Exact baseline and target number to be inserted by ACEs according to their established structures; however, at least 3 meetings per year are required.
Annual disclosed unqualified external financial audit with the ACE annual budget	Disclosed means available on particular ACE’s website. Both the planned and the executed budgets must be available. Notes: - /
Annual meetings of all supported ACEs and PIs carried out, to coordinate and discuss program process, lessons learnt, and recommendations for addressing bottlenecks; all shared in a report.	This indicator focuses on measuring the → Regionality of the program. Notes: - /
Level of satisfaction of ACE and ACE Steering Committee on quality of support provided by the Regional Facilitation Unit (AAU).	Survey feedback from ACEs and Steering Committee members of RFU/AAU’s support. Share of respondents answering somewhat satisfied or highly satisfied by RFU/AAU’s performance. Notes: - /
No of ACE-Institutions reporting on at least 85% of their indicators, submitting the RF to the AAU in time.	This indicator focuses on measuring the →Admin/Governance Qualityof the program. Notes: - /
No of students from non-ACE hosting countries studying in selected ACEs.	This indicator focuses on measuring the →Regionality of the program. Notes: - This indicator refers to Component 2.3 only: Non-ACE hosting countries are countries that are participating in the project through Component 2.3 – notably The Gambia.
Direct Project Beneficiaries	This is a core indicator measuring the number of direct project beneficiaries, which is measured as the number of students enrolled in new specialized short term, masters and PhD programs, number of faculty trained by the ACEs and faculty benefiting in the 19 selected ACEs.

Table 2 Disbursement Linked Indicators per Africa Center of Excellence (receiving US\$8 million)

Disbursement Linked Indicator	Action to be Completed	Amount of the Financing Allocated (expressed in USD equivalent)	Disbursement Calculation Formula (expressed in USD equivalent)
DLI #1: Regional specialization endorsed and institutional readiness	<ul style="list-style-type: none"> The national representative in the Steering Committee has endorsed a resolution to promote regional specialization among Participating Universities Conditions for Effectiveness have been met. 	800,000	800,000 (disbursed when all results have been completed)
DLI #2: Excellence in education and research capacity and development impact	<p>DLR#2.1: New short term students in ACE courses of which at least 30% must be regional students. Amounts: 400 per national student, 500 per female student, 800 per regional student, and 1000 per female regional student.</p> <p>DLR#2.2: New Master students in ACE courses of which at least 30% must be regional students Amounts: 2,000 per national student, 2,500 per female student, 4,000 per regional student and 5,000 per regional female student</p> <p>DLR#2.3: New PhD students in ACE courses of which at least 30% must be regional students. Amounts: 10,000 per national student, 12,500 per female student, 20,000 per regional student, and 25,000 per female regional student</p> <p>DLR#2.4: N# of outreach “periods” for faculty, master and PhD students. Amounts: 2,000 per outreach period within the country and 4,000 per outreach period within the region</p> <p>DLR#2.5: International evaluation and accreditation of quality of education programs. Amounts: 600,000 per program internationally accredited; 100,000 per program nationally or regionally accredited; 100,000 per program per gap-assessment certified or undertaken by an international quality assurance agency; 100,000 per program for self-evaluation a satisfactory international standard; 100,000 per program description meeting international standard</p> <p>DLR#2.6 Published articles in internationally recognized and peer reviewed journals Amounts: 15,000 per article and 30,000 per article with a regional co-author.</p> <p>DLR#2.7: Externally revenue generation Amounts: US\$ 1 per externally generated revenue, and US\$ 2 per externally generated revenue from the region</p> <p>DLR#2.8: Meeting milestones for improved learning and research environment specified in the Performance and Funding contracts. Amount per milestone: 400,000</p>	6,400,000	<p>DLR#2.1: 400,000</p> <p>DLR#2.2: 400,000</p> <p>DLR# 2.3: 400,000</p> <p>DLR#2.4: 800,000</p> <p>DLR#2.5: 800,000</p> <p>DLR#2.6: 800,000</p> <p>DLR#2.7: 1,200,000</p> <p>DLR#2.8: 1,600,000</p>

Disbursement Linked Indicator	Action to be Completed	Amount of the Financing Allocated (expressed in USD equivalent)	Disbursement Calculation Formula (expressed in USD equivalent)
DLI#3 Timely, transparent and institutionally reviewed Financial Management	DLR#3.1: Timely withdrawal application supported by financial reporting for the ACE account for the period DLR#3.2: Functioning Audit Committee under the university council DLR#3.3: Functioning internal audit unit for the university DLR#3.4: Web Transparency on Financial management (web-access to audit reports, interim financial reports, budgets and annual workplan)	400,000	DLR#3.1: 25,000 per year DLR#3.2: 25,000 per year DLR#3.3: 25,000 per year DLR#3.4: 25,000 per year
DLI#4 Timely and audited Procurement	DLR# 4.1 Timely procurement audit DLR#4.2: Timely and Satisfactory Procurement Progress	400,000	DLR#4.1: 50,000 per year DLR#4.2: 50,000 per year

Note:

- Total disbursement is limited to the overall amount of financing to each ACE.
- For the five ACEs that receive less than US\$8 million equivalent, the share of financing allocated to each DLI remains the same as the above (10 percent for DLI#1, 80 percent for DLI#2, and 5 percent each for DLI#3 and DLI#4).
- The amount per specific action to be completed under each DLR remains the same for all ACEs for DLI 2, (DLR#2.1-DLR#2.7). For example, disbursement per each new regional short term student is US\$800 equivalent for all ACEs. For DLI# 1, 3 and 4, the amount per action to be completed is proportional to the total financing allocated. For instance, the disbursement for each timely (annual) procurement audit equals 0.625 percent of the total financing allocated to that ACE (rounded off).
- During implementation each ACE will have flexibility to achieve education and research excellence through completing different combinations of the above education and research results (DLR#2.1-2.7). Therefore, the amounts allocated to each DLR#2.1-2.7 can be adjusted downwards and upwards, with a maximum of 50 percent above the amount allocated to each DLR. For example, for research publications (DLR#2.6) the above allocated financing amount of US\$800,000 equivalent (10 percent of the financing) can be increased up to a maximum of 50 percent to US\$1,200,000 equivalent (15 percent of the financing). The financing allocated to results for improved learning and research environment (DLR#2.8) is expected to remain fixed. All adjustments to the amount of financing per DLI and DLR, including to DLR#2.1-2.7, will have to be requested by the ACE and approved by the National Review Committee and the World Bank.

Annex 2: Detailed Project Description

Africa Higher Education Centers of Excellence Project

1. **The Project Development Objective** is to support the Recipients to promote regional specialization among participating universities in areas that address regional challenges and strengthen the capacities of these universities to deliver quality training and applied research.
2. **The project consists of two components.** Component 1 will strengthen the capacity of 19 competitively selected Africa Centers of Excellence (ACE). These ACEs will deliver regional, demanded, quality training and applied research in partnerships with regional and international academic institutions and in partnership with relevant employers and industry. Component 2 consists of regional activities to build capacity, support project implementation, monitor and evaluate, and develop regional policies. Further, component 2 will, in a novel and demand-driven way, boost regional collaboration by supporting The Gambia in strengthening its higher education institutions through education services purchased from the ACEs strengthened under Component 1.

Component 1: Strengthening Africa Centers of Excellence – (Total costs including contingencies US\$281.6 million of which IDA US\$140.8 million)

3. Component 1 will support 19 selected institutions to become ACEs in STEM, Health and Agricultural Sciences within areas that are pertinent to producing graduates and knowledge solutions to enhance development in Africa. These Centers will produce graduates, research and knowledge services to several countries and therefore become regional assets. Fourteen higher education institutions were selected through an open, rigorous, transparent and merit-based selection process to host fifteen ACEs (see table A2.1). The project invited government to submit proposals from both public and private institutions subject to the government's commitment to use IDA resources for submitted proposals. An institution could submit up to two separate Centre of Excellence proposals. The maximum grant amount for an ACE grant is US\$ 8.0 million. Only one institution (University of Ghana) had two ACE proposals selected with a proposed grant amount of US\$16 million.

Table A2.1: Selected Africa Centers of Excellence, institutions and country, and disciplines.

Africa Center of Excellence Title	Lead Institution & Country	Discipline
ACE for Agricultural Development and Sustainable Environment	Federal University of Agriculture, Nigeria	Agriculture
ACE for training plant breeders, seed scientists and technologists	University of Ghana, Ghana	Agriculture
ACE in the Poultry sciences	University of Lome, Togo	Agriculture
ACE in Dryland Agriculture	Bayero University, Nigeria	Agriculture
ACE for Food Technology and Research	Benue State University, Nigeria	Agriculture
ACE for Genomics of Infectious Diseases	Redeemers University, Nigeria	Health
ACE for Cell Biology of Infectious Pathogens	University of Ghana, Ghana	Health
ACE on Neglected Tropical Diseases and Forensic Biotechnology	Ahmadu Bello University, Nigeria	Health
ACE in Phytomedicine Research and Development	University of Jos, Nigeria	Health
ACE in Reproductive Health and Innovation	University of Benin, Nigeria	Health
ACE in Maternal and infant Health	Université Cheikh Anta Diop, Senegal	Health
ACE in Materials	African University of Science and Technology, Nigeria	STEM
ACE in applied mathematics	Université d'Abomey – Calavi, Bénin	STEM
ACE in Information and Communication Technologies	Université de Yaoundé I, Cameroon	STEM
ACE in the education and research with Water, energy, and environment sciences and technologies	Institut International d'Ingénierie de l'Eau et de l'Environnement (2iE)	STEM/ Agriculture
ACE for Oil Field Chemicals	University of Port Harcourt, Nigeria	STEM
ACE for Water and Environmental Sanitation	Kwame Nkrumah University of Science and Technology, Ghana	STEM
ACE in Science, Technology and Knowledge	Obafemi Awolowo University, Nigeria	STEM
ACE in Mathematics, Informatics, and ICT	University of Gaston Berger, Senegal	STEM

4. This component description will first present the selection process for the Centers, then describes the project activities for the ACEs, and lastly detail funding and performance contract parameters.

The Competitive Selection Process

5. The 19 ACEs were selected through an open, rigorous, transparent, competitive, and merit based process as laid out in the publicly disclosed evaluation protocol. The process consisted of the following steps:

- (i) Elaboration of the project concept and draft selection process
- (ii) Consultations on project design
- (iii) Consultation and joint project development with countries interested in the project and with IDA availability
- (iv) Consultations on draft selection process and revised design
- (v) Call for proposals to institutions in the countries willing to invest available IDA resources
- (vi) Information sessions for proposal preparation and submission– led by the governments;

- (vii) Proposal submission by institutions to the government, which submits them to the RFU
- (viii) Desk evaluation of institutional proposals resulting in around 31 proposals short-listed for site visits
- (ix) Site-visits to the short-listed institutions and an assessment of the institutional leadership and fiduciary capacity
- (x) Complete evaluation results to submitted to the ACE SC
- (xi) Consideration by the ACE SC of the evaluation process and recommendation of the evaluation committee resulting in a selection
- (xii) No Objection from the World Bank for the evaluation process and its results
- (xiii) Announcement of results – with the evaluation score and a justification to each applying institution
- (xiv) Complaint redressal
- (xv) Selected institutions submit a full implementation plan based upon the approved proposal and the evaluation feedback;(ongoing)
- (xvi) Signing of the Performance and Funding contract;(to be completed)

The following paragraphs provide additional detail on the key steps of the selection process, a fundamental aspect of project design.

6. ***Eligibility criteria to submit proposal.*** Only institutions that offer master and PhD degrees were eligible to submit a proposal. This criterion ensured that selected institutions had an existing potential for academic excellence, and a ready base for expanding postgraduate research and training, which is central to establish excellence and a highly qualified faculty.

7. Institutions that could not meet the above eligibility criteria were informed that they can participate in the project through partnerships with selected institutions. Further, as part of Component 2, governments can participate in the project by acquiring education and research services from the selected ACEs.

8. ***Devolution of financial decision making to ACE's:*** Sustainability of the Africa Centers of Excellence is a critical concern which needed to be addressed up-front as part of design. The key mitigation action is to build capacity to raise revenue during project implementation and ensuring that the Center of Excellence/university is empowered to retain the revenue that it generates on its own. Therefore, as part of the signing of the performance agreements, the governments will be asked to devolve the following three financial powers to the Centers of Excellence/university: (i) the right for the Center of Excellence (with approval of the university) to set and charge tuition for all short-term courses as well as Masters and PhD programs. Tuition fees for under-graduate programs can be subject to outside regulations; (ii) retain the external revenue that it generates (ACE grant and other revenue generated by the ACE). If the university has institutional revenue sharing policies established, an acceptable part of the externally generated revenue can be shared with the rest of the institution. The share going to the institution has to be stated in the agreement, and the ACE grant has to go in its entirety to the proposal agreed; and (iii) An ACE designated account (operating as an endowment fund) will be set up and all external generated funding as well as project funding will go into this account.

9. ***Application process.*** Information to interested institutions and governments was made available on the web and through the government ministry/agency in charge of higher education. Further, a limited number of information sessions at the sub-regional/country level were conducted to help answer queries from applying institutions.

10. Explicit government support and ownership was considered absolutely fundamental to the success of the project. Therefore, all applications had to be submitted through the national agency/ministry in charge of higher education. This agency/ministry forwarded the supported applications to the RFU (AAU), along with a cover letter stating support to the submitted proposals and willingness on behalf of the government to borrow IDA resources for the applications selected for funding.

11. ***Evaluation of institutional proposals.*** The AAU and the World Bank organized a systematic, detailed and thorough desk and on-site evaluation of the proposals using 35 recognized international and African experts, including diaspora. The committee consisted of recognized academicians who possessed the adequate expertise to evaluate education and research programs within their knowledge domain. The evaluators were without conflict of interest to the submitted proposals. The evaluation consisted of three different assessments, meaning that each selected proposal has been reviewed and scored by at least 7 independent evaluators. Each shortlisted proposal could score a maximum of 100 points during the evaluation process. It was not within the mandate of the ACE SC, the World Bank or the AAU to make changes to any of the external evaluators' scoring. Details were as follows:

12. ***Technical Desk Review:*** The first scoring was given for the quality of the proposal based on desk reviews (as the mean of three individual reviewers' assessments after a panel review for consistency), scoring range was 0 – 70 points (see criteria in table A2.2).

Table A2.2: Criteria for the technical desk review:

Criteria for Technical Evaluation	Mark
<i>(1) Potential for Regional Development Impacts:</i>	
<i>Importance of development topic for the region and the innovation of the proposal – including alignment with regional and national development plans</i>	10
<i>Potential regional development impact – including strengths and relevance of collaboration with sector partners (employers, organizations, and governments) that will employ and use the graduates and knowledge of the Center, and the regional-breath of this collaboration, including inclusion of institutions in fragile or post-conflict countries.</i>	10
<i>Potential for raising the quality and relevance of education at national and regional academic partner institutions—including strengths of existing regional collaborations</i>	5
<i>(2) Potential for Excellence</i>	
<i>Potential for Learning Excellence – including the availability of existing physical and human resources of expertise; relevance, excellence and strengths of proposed international collaboration</i>	15
<i>Potential for Research Excellence</i>	10
<i>(3) Sustainability (financial and academically) of proposal/impact</i>	10
<i>(4) Social responsibility – Inclusion of rural/remote institutions as partner institutions, and impact on disadvantaged students, including girls</i>	5
<i>(5) Quality and Consistency of proposal</i> (incl. fit with strategic plan analysis)	5
<i>Total</i>	70

13. Short listing: The top 31 evaluated proposals were shortlisted for further evaluations. The shortlist was reasonable balanced across language groups, disciplines and countries.

14. On-site leadership assessment: A small evaluation team consisting of at least two internationally reputed university leaders and a leading researcher within the field of expertise of the proposed Center of Excellence visited each of the 31 short listed institutions. The team assessed leadership and management capacity of the universities and the proposed ACE as well as ascertain the feasibility of the implementation of the proposed institutional project given the existing academic capacity, infrastructure, including learning and research equipment, and management capacity. Specifics on what the evaluation team assessed are summarized in table A2.3. This evaluation constitutes up to 25 points of the total score.

Table A2.3: On-site leadership evaluation of shortlisted institutions

On-Site and leadership evaluation	Marks
Institutional leadership and vision (based upon interview of the head of the institution, chair of the board and existing institutional strategic document)	5
Center leadership and administrative capacity (based upon interview with the proposed center leader and review of existing and planned administrative capacity)	5
Institutional ownership of proposal as evident from faculty and student awareness and inclusion	5
Government involvement to support the institutional proposal and alignment to strategy	5
Consistency between the submitted proposal and the reality on the ground as observed by the visit evaluation team	5
Financial management and procurement track record and capacity	5
Total	25

15. Fiduciary Capacity Assessment: The final assessment was on fiduciary capacity with 0 – 5 points as the scoring range.

16. Final Selection by ACE SC: Based upon the aggregated evaluation marks of the technical and the On-site and leadership evaluations, the evaluation committee submitted its results to the ACE SC along with appropriate documentation. All seven countries were represented. The ACE SC was empowered to make the final selection of 15 proposals to be funded under the project with regional funds. It was mandated to carry out an objective, transparent and merit-based selection, ensuring a reasonably equitable distribution across countries, language groups and disciplines. Therefore, the SC had the authority to make adjustment to the purely merit-based selection, and it could select ACE proposals on specific development areas that are considered critical. The Steering Committee chose to select one ACE project per country (merit based per country) and at least 4 ACE projects' in each discipline (merit based within discipline). All applying institutions received their evaluation mark and a summary of the main strengths and shortcomings of their proposal.

17. Development of a full ACE Implementation Plan: Selected institutions will furthermore receive a detailed list of comments and suggestions from the evaluators. Additional support will be provided from the RFU and partners for proposal improvements. The institutions will revise their proposal taking into account these comments and suggestions for improvement and resubmit the final institutional project. Further, the fiduciary assessments, safeguards

screening as well as safeguard management plans and fiduciary actions will be prepared as per needs. The institution will submit the improved proposal, a 1st year implementation plan, procurement plan, and safeguard management plan, and a quick desk review will be undertaken to ensure that the key improvements in the proposal has taken place.

Detailed description of ACE activities

18. **Each selected institutions will implement their own Africa Centre of Excellence proposal aiming to help address a specific regional development challenge through preparation of professionals (education), applied research and associated outreach activities to partners.** Within that, institutions will have autonomy to implement their own institutional specific proposal which encompasses the following five elements:

- (i) Enhance capacity to deliver *regional high quality training* to address the development challenge.
- (ii) Enhance capacity to deliver *applied research* to address the regional development challenge.
- (iii) *Build and use industry/sector partnerships* to enhance impact of the Center on development and increase relevance of the centers education and research.
- (iv) *Build and strengthen regional and international academic partnerships* to raise quality of education in other institutions in the region.
- (v) *Enhance governance and management* to improve monitoring and evaluation, administration, fiduciary management, transparency, ability to generate resources, and project implementation.

These five sets of project activities are closely intertwined. For instance, industry partnership and academic partnership are necessary inputs into enhanced capacity to deliver high quality training, and on the other hand, high quality training is a key factor in successful industry and academic partnerships. The following discusses activities related to each of the 5 set of priorities in greater detail:

Enhance capacity to deliver regional high-quality training

19. **These activities aim to raise the capacity of the Africa Center of Excellence to form a cadre of professionals with cutting-edge conceptual and hands-on competences to address the development challenge of the center.** The three key indicators for measuring progress towards achieving the goal of delivering regional high quality training will be: (i) Number of regional and national students enrolled in short-term specialized courses and in bachelor, master and PhD degree programs; and (ii) Number of education programs under the Center of Excellence that meet international quality benchmarks; and (iii) externally generated revenue.

20. **This will be achieved by implementation of the institutional plan, designed by the institution and reviewed by external experts, to develop and strengthen academic programs in the ACEs.** The plan consists of an institutional specific mix of the following activities: (i) developing and offering new specialized short-term education programs aimed at industry professionals for further development; (ii) developing and offering of new specialized Master

and PhD level programs; increasing quality and relevance of existing teaching through revision of curricula and teaching-methods based upon industry professional standards; incentivize faculty for good performance, including incentives for research and awards for top teaching. Only non-monetary incentives to faculty to achieve the objective of the proposal can be funded by the ACE grant. The project does not restrict the use of other generated revenue; (iii) improvement of laboratories, classrooms, computers, and other teaching facilities through equipment purchases and limited civil works. Civil works will be limited to 25 percent of the expected costs of the ACE, and should only finance rehabilitation of building and minor extensions of building; (iv) establishing international benchmarking and accreditation of education programs; (v) teaching-learning improvement Programs to upgrade teaching capacity and provide cutting-edge student-centered teaching; and (vi) upgrade faculty qualifications. Institutions are not constrained by the above list of suggestive activities. Other activities could be permissible for funding as laid out by the Project Regional Operations Manual. Lastly, activities under the other four elements of the proposal, research, industry/sector partnerships, academic partnerships, and governance and administrative strengthening, will equally contribute to strengthening of the Centers' educational capacity.

Enhance Capacity to produce and communicate applied research at the regional level

21. These activities aim to raise the capacity of the Africa Centers of Excellence to conduct industry-relevant applied research. The key indicator for measuring progress towards achieving the related result "Improved Research Capacity" will be: (i) Number of published research outputs and (ii) generation of revenue.

22. This will be achieved by carrying out an institutional specific mix of the following activities: (i) Purchase and improvement of research facilities and research material; (ii) Incentivize research and publications (non-monetary incentives as discussed above); (iii) increase in Master and PhD students, including potential award of scholarships, if necessary, to attract young talent. The project strongly encourages Africa Centers of Excellence to prioritize any scholarships for degree courses to young graduates over mid-career faculty members; (iv) assistance in grant proposal writing and publication preparations, such as in translation and editorial support; (v) participating in, and organizing of, conferences and seminars for presentation of research; (vi) faculty exchanges with other research institutions, (vii) access to resource material, include library material and access to e-journals; (viii) costs associated with research collaboration; and (ix) minor civil works to improve research facilities.

Regional and international academic partnerships

23. Academic Partnerships serve to make the Center of Excellence a nodal point that connects globally and disseminates regionally in West and Central Africa. The ACE proposals have identified a record number of academic partners at the regional and international level. The focus on strengthening such partnerships under this component will serve three main objectives: (i) increasing the capacity of partner institutions in the region to deliver quality education and conduct research; (ii) raising the centers' educational and research capacity through drawing upon partnership with internationally leading institutions within the same domain, and (iii) built

upon the strengthens of national and regional institutions –sharing of unique physical and faculty resource- to create synergies and thereby raise quality of education and research.

24. The key indicators for measuring progress towards achieving the related result ‘Increased National and Regional Impact through institutional collaboration at the regional level’ will be as follows: (i) Share of regional (non-national) students enrolled in ACEs and regional faculty, and (ii) regional research publications. Further, intermediate indicators will measure different aspects of the partnership agreements.

25. The ACEs have partnered with institutions that have or need capacity to produce skills to address a particular development challenge. This includes similar international academic centers globally, universities in the region, and national and regional research institutions. In particular, collaboration with regional research institutions is critical within agriculture and health where substantial academic capacity is located outside universities in sector-specific research institution. The partnerships can be continuation of on-going partnerships and/or new partnerships.

26. The academic partnership activities include: Collaboration in delivery of education programs, faculty development programs for regional faculty, joint conferences, joint research, sharing access to specialized research, learning equipment and library resources (giving students and faculty exposure to different learning environment and equipment), student and faculty exchange, joint organization of specific courses for example at the post-graduate level.

27. Selected institutions will continue to revise and update the academic partnership action plan following the evaluation comments, including consideration of new partners. An academic partnership agreement is being developed by the Centers of Excellence in close collaboration with its partners, and co-signed by all major partners. This agreement will form part of the performance and funding contract to be signed with the Government. The academic partnership action plan will be reviewed and revised at mid-term.

Build and use regional and national industry partnerships

28. The key objective of these activities will be twofold: (i) provide skills and knowledge to address the development challenge (putting higher education to work) and (ii) benefit the Center through improved relevance of the Center’s teaching-learning and applied research. The key indicators for measuring progress towards achieving the related result are: (i) Number of Students and Faculty with at least 1 month collaboration/internship in a company or a sector institution; (ii) externally generated revenue.

29. These objectives will be reached through partnering with industry institutions, including companies and service delivery institutions that work to address the development challenge that the Center is focused on. In this context industry thus should be interpreted broadly to include institutions that work in the economic sector of the challenge, including for example public teaching hospitals for health and famer associations for agriculture, and not just private companies, such as manufacturing or mining companies. Also, these partnerships are both national and/or regional in nature. Partnerships with key national and regional industry associations or other important players are a strong indication of the potential relevance and impact of the Center of Excellence. In some ACEs, Industry partnerships are also with “lower-level” industry/sector-specific training institutions, such as institutions that provide technicians education, midwifery education, or farmers’ extension service training.

30. Each institution will implement the action plan for industry partnerships (as designed in its proposal and subsequent revisions), one that is tailored to its specific development challenge, its existing industry partnerships, and new opportunities for partnerships. These activities could be a combination of: (i) industry-lectures; (ii) master and PhD thesis based upon industrial research with companies; (iii) advisory boards, (iv) placement of students and fairs; industry-outreach cell to promote industry partnerships and liaise with industry. These industry partnership activities are closely linked with the education and research activities, in the sense that the partnerships activities could include training of industry professionals, for example training-the-trainers programs, and joint research. The main industry partnerships will be defined in MoUs at the on-set, and the plans will be updated at mid-term review.

Improving governance and administration of the institution and the ACEs

31. The key indicator for measuring progress towards achieving the related result 'Improved Governance of ACEs' are: Improved institutional monitoring of fiduciary responsibility, notably, functioning internal audit unit and a functioning audit committee in the Board of the Institution, timely unqualified audits, and procurement verification and progress reporting. Further, regularity and transparency of decision making and planning are two intermediate indicators.

32. Activities to achieve strengthening governance and administrative capacity of the institution may include the following elements: (i) implementation of new and/or improved grants management, procurement, and monitoring procedures; (ii) hiring or training of existing personnel for identifying grants opportunities, management, procurement, and monitoring; (iii) hiring and training for fund raising; (iv) improving board procedures – having regular meetings, strengthening the audit committee of the board, review board membership to include external members such as private sector representatives, and openly disclose board meeting minutes for greater transparency; (v) establishing internal evaluation procedures towards quality control; (vi) supporting reporting on lessons-learning in implementing the programs and making these available to regional bodies aggregating this information and partners.

Performance and Funding Contract and related financing parameters

33. Each selected institution will sign a performance and funding contract with the government which states the following grant is subject to a few financial parameters: (i) At least 15 percent of the funding must be invested in the partnerships under a related partnership agreement(s), (ii) at least 10 percent must be invested in partnerships activities with regional (non-national) African partners; (iii) civil works will be limited to 25 percent of the grant; (iv) the project cannot finance monetary incentives of faculty, administrative personnel or public employees, and (v) purchases of vehicles must be explicitly included in the approved annual workplan in order to be eligible. The funding and performance agreement will also include the government's indicative planned funding of institutional staff during the project.

34. At mid-term, expected to be two years after signing the performance contract, there will be a thorough evaluation of performance. The grant amount to each ACE and its usage will be reviewed, and can be adjusted. In particular, it is expected that ACEs that are behind in implementation will see their grant be reduced by 50% of the uncommitted amount that is above half of their grant. Three years after signing, it is planned that half (50%) of the remaining undisbursed institutional grant will be removed. The additional funding would be made available to the institutions performing well or new shorter institutional grants. These gradual and

automatic reductions in grant amounts seek to reduce the risk of large committed funds to institutions that are slower in achieving results and implementation.

Component 2: Enhancing Regional Capacity, Evaluation and Collaboration – (Total cost, including contingencies US\$9.2 million of which IDA US\$9.2 million)

35. This component will focus on the regional specialization, overall project coordination and facilitation, including ensuring coordination between the ACEs, joint lessons learning, and ensuring measurement of, and reporting of, aggregated results. This Component will also focus on supporting the government of The Gambia to strengthen its higher education institutions using the ACEs and increase talent mobility from The Gambia to the ACEs.

Component 2.1 Enhancing Regional Capacity Building and Evaluation– total costs, including contingencies US\$5.0 million.

36. This sub-component aims to provide timely, sufficient, precise and reliable information for the measuring and reporting of aggregated results to improve and assess the performance of the selected institutions. The project activities will be:

- Capacity Building activities for the ACEs. This could include training and capacity building within: education and project management, fiduciary training, and specific topics as per needs identified by ACE, for example grant proposal preparation, university board functioning etc.
- M&E: (i) Enhancing the M&E structures of ACEs and the RFU to facilitate regular and timely reporting on progress; (ii) Workshops and Trainings for ACEs' relevant staff to jointly develop and report on their results framework; (iii) third party evaluation and technical evaluations for the DLI and results reporting; (iv) other M&E activities including international evaluation groups, and baseline studies, assessments and surveys as per need.
- Support regional policy making through working with ECOWAS, and potentially other regional bodies, to prepare policy studies on regional student and labor mobility and other relevant higher education issues; and to build capacity for regional policy making within higher education, including training of staff.
- The Facilitation activities of the regional facilitation unit, the ACE SC, and the national review committees, including activities related to project management, staff, operating costs, per diem, communication, supervision and implementation visits to individual ACEs. This also includes regular supervision/implementation review, workshops to discuss lessons learnt and activities to support the scaling up of the centers of excellence initiative.

Component 2.2 Project Facilitation in Nigeria – total costs, including contingencies US\$1.2 million

75. This sub-component will finance project implementation support and facilitation by the National Universities Commission in Nigeria. This includes national facilitation, training, and supervision in fiduciary aspects as well as national monitoring and evaluation and minor technical assistance.

Component 2.3 Demand-driven regional services – The Gambia – total costs, including contingencies US\$3.0 million

37. The objective of this sub-component is to support, in a demand-driven manner, a country without a Center of Excellence through the regional services of the Africa Centers of Excellence. The Gambia will receive funding to purchase education services from the ACE for national universities and for professional development of civil servants in order to meet critical national needs in skills and training. This demand-driven approach, where the government and national institutions decide the kind of education services needed and from which Center of Excellence, aims to increase the benefit of the ACE project broadly across West and Central Africa, and benefit the ACEs that are most demand-driven. The proposed sub component will contribute toward the following performance indicators: (i) share of regional faculty training at the ACEs; (ii) share of regional students training at ACEs, and (iii) number of national faculty research pieces co-authored with non-national faculty.

38. **Potential types of Services that the ACEs could deliver to The Gambia include**, but are not limited to:

- Visiting Faculty Mentorship Program at ACE: Gambian faculty will train at the ACE, during which time they are designated as visiting faculty. Each priority country university participant is assigned an ACE faculty mentor with the goal of co-authoring research in his/her field, and will attend organized training sessions as part of the program as well..
- Experienced Faculty Lecture Series: Faculty from the ACE can teach at the Gambian institutions.
- Access to Labs and Equipment, and related training at ACE: Gambian faculty can travel to the ACE to access advanced equipment and receive training using advanced lab equipment available at ACE.
- Scholarships and Student Exchange Programs: Gambian students could be supported to attend specialized training at an ACE.
- Administration Training and Curriculum Development: Professional administrative training courses and curriculum development courses provided by the ACE to relevant professionals within priority country universities and governments.
- Civil Servant training at an ACE: Government workers in key sectors such as Health and Extractive Industries attend a one week training course at the ACE on best practices, cutting edge research in their field and applications to policy.

Travel and per diem costs will be standard for the sub-region. The costs for each academic service will be put into a bid-process and subsequently negotiated between the ACE and the purchasing beneficiary. Scholarships and student exchange programs will be limited to no more than US\$25,000 per person to ensure that the funds benefit broadly, and are not concentrated on a few individuals.

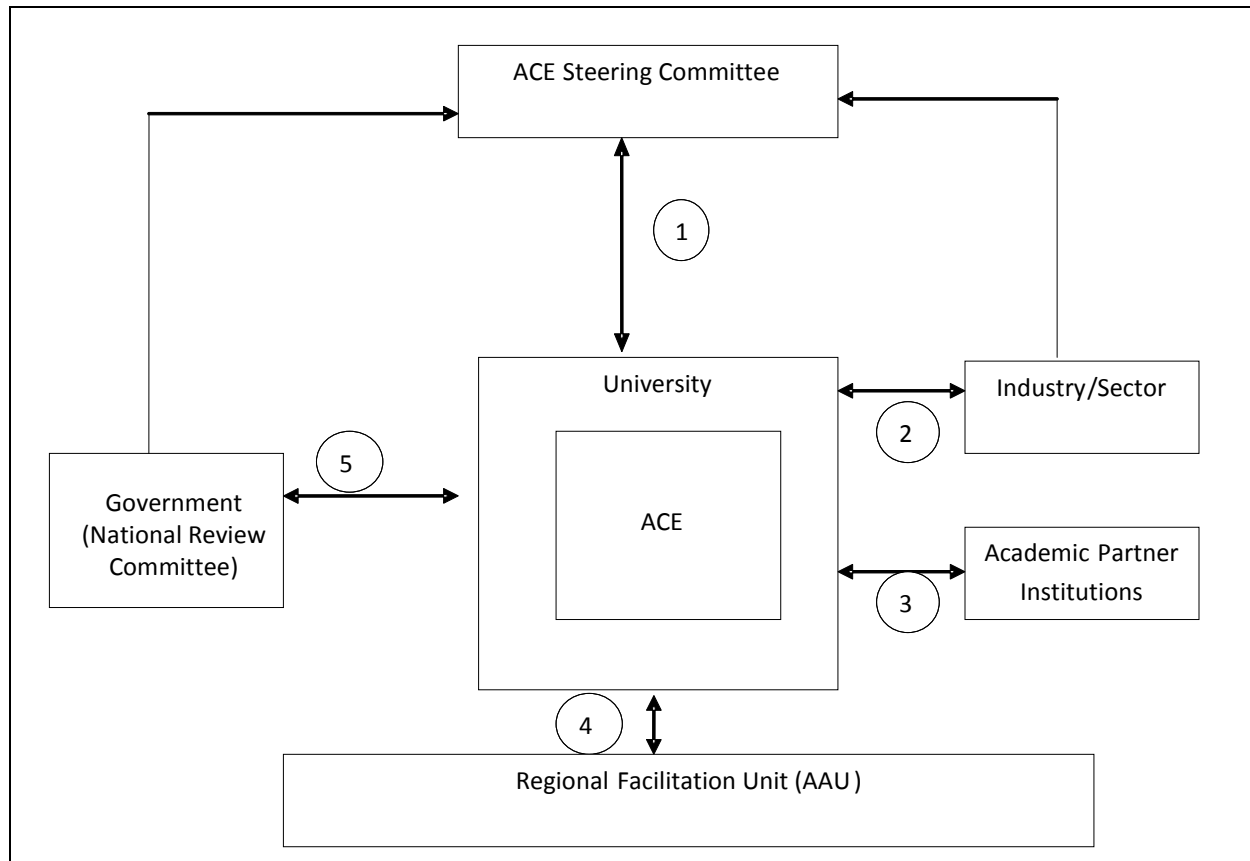
Annex 3: Implementation Arrangements
AFRICA: Africa Centers of Excellence

1. The following entities which operate at the national and regional levels will be directly involved in the implementation, supervision and monitoring of the project. Implementation arrangements, responsibilities and procedures are described in the Key Responsibilities section of this annex. Further detail terms of reference are provided in the Project's Operations Manual.

- (i) Universities - ACE. The Project activities will principally be implemented by the selected Universities establishing Africa Centers of Excellence. The individual ACE is responsible for strategic planning, proposal preparation, project implementation, monitoring and evaluation, and reporting.
- (ii) Governments. Project implementation support and supervision at the national level would be undertaken by the National Project Performance and Review Committee
- (iii) RFU-hosted within the Association of African Universities. The Association of African Universities will coordinate and facilitate regional activities to the ACE, partner institutions and be responsible for implementing regional activities for non-ACE countries participating in the project.
- (iv) ACE SC. The project will operate under the overall guidance and oversight of the ACE SC whose main task is to set policy guidelines and assist ACEs to ensure the achievement of the project objectives
- (v) Partner Institutions and Private Sector
- (vi) Role of development partners and international Higher Education partners

2. This annex will further also lay out the fiduciary arrangements of the project with respect to the FM, procurement, safeguards and M&E. The fiduciary capacity available within higher education or related project would provide implementation support and possibly oversight for the ACE. Further, the ACE project would to the extent feasible, use the same fiduciary procedures as in the closely related project.

Project Organogram



Key for Diagram 1:

1. ACE Steering Committee provides project oversight and guidance to all project participants (ToRs and composition summarized below)
2. Partnerships between ACEs and industry/sector organizations
3. Partnerships between ACEs and other academic institutions
4. The RFU provides regional capacity building, evaluation and facilitation to the ACEs (ToRs and composition summarized below)
5. The Government has a financial and legal oversight role over the ACEs as captured in performance and funding agreement between the ACEs and the government. This oversight of both MoF and the agency/ministry in charge of higher education is carried out through the National Review Committee (ToRs and composition summarized below).

Key Responsibilities

Governments:

3. Each government hosting an ACE will sign a Financing Agreement with IDA. The Government will specify the ACE as the Implementing Entity and sign a performance and funding agreement (subsidiary agreement) for its work. This agreement will define the

responsibilities of the institution, including fiduciary arrangements, reporting arrangements as well as the terms and conditions for its operation, including engagement with partner institutions.

4. In addition to those directly involved in execution, the following agencies will provide support and oversight to the operation:

5. **Ministry of Finance (MoF)** will ensure government commitment and ownership to the project as well as ensure the funding channels for disbursement linked indicators are set up adequately. The MoF will ensure that the financial set-up for the DLI approach is adequately functioning with a commitment to open a budget line for the ACE investment program up to the amount agreed in the Financial Agreement and in the agreement between the MoF and the host university. (Details on the disbursement arrangements are provided in the Financial Management section of the annex)

6. **The Ministry of Higher Education** (or the Ministry/agency in charge of higher education) will ensure project ownership, ensure alignment between the project and the national higher education policies, and promote active partnership among the country's higher education institutions and those ACEs in West and Central African countries. The Ministry assigns a focal point who will be the country representative in the ACE Steering Committee.

7. **Other line ministries**, such as Ministry of Agriculture, Mining or Health, depending on the focus of the selected ACE will seek to promote sectoral impact of the project, facilitate partnerships, support project activities, and align the project with national strategy. This will include facilitating linkages and communication regarding the human resource and skills needs of the sector as well as the priorities for applied research.

8. **Related project implementation unit.** The performance and funding agreement between the Government and ACE will provide details of this unit, assuming such a relevant entity exists within a related World Bank or another donor funded Project. Project implementation support and supervision at the national level will be integrated within an existing World Bank project to the extent possible. This is planned to be the case for: (i) Senegal, where the Ministry's implementation team for the on-going WB-support project will support project implementation; (ii) NUC in Nigeria where the main staff involved in a recently closed WB-supported Science and technology project will facilitate and oversee project implementation, (iii) in The Gambia, the project will equally use the Government team implementing another WB-support project for the fiduciary management of the ACE project, and (iv) in Burkina Faso, there is a parallel existing support program to 2iE (the selected institution hosting the ACE). In the other cases (Benin, Cameroon, and Togo), the government will oversee implementation through the personal in the national review committee jointly with the Bank's supervision.

I. Africa Centers of Excellence (ACE)

9. Each selected ACE will be responsible for implementing its own proposal as part of Component 1. Each ACE will both at the national and regional levels implement and monitor the Project activities that fall under its respective responsibilities. The ACE will ensure that Project funds are planned for and invested according to the schedule and within the framework agreed upon during the preparation of the Project.

10. The ACE will have an ACE team from within the university that is multi-sectoral involving an ACE CL who reports to the pro-Vice Chancellor or Deputy Vice Chancellor. The

faculty members within the institution will serve as extended members of the ACE team in helping implement the ACE proposal. The ACE team will also include a financial management officer, procurement officer and monitoring and evaluation officer who will be responsible for the fiduciary responsibilities of the project.

11. Key tasks of the ACE include implementing activities under component 1 and preparing annual work plans based on the full implementation plan agreed at the time of effectiveness. The annual work plan will be reviewed on an annual basis. The detailed activities of each ACE are provided in the operation manual. A summary of these tasks include :

- (i) Implement activities for component 1 that strengthen the quality of education through enhanced teaching capacity to modern standards within the focus areas of the ACE. Details of the type of activities can be found in Annex 2.
- (ii) Each ACE will be required to serve as a hub for a network of partner institutions within the same country or sub-region. Partner institutions can be universities, other types of higher education institutions or research institutes within the thematic area hosted by the aspiring ACE. A detailed partnership agreement between the aspiring ACE and each partner institution will specify the nature of the partnership between the two institutions. The ACE and the partner institution/network will agree to an annual implementation plan to be implemented by the partners. Funds for capacity building in partner institutions will be held and managed by the ACEs which serve as hubs. The respective ACE will be responsible for all fiduciary and M&E matters related to the use of these partnership funds
- (iii) The ACE will be responsible for its own fiduciary and safeguards functions. This includes undertaking its own procurement, maintaining Project financial accounts according to Project requirements and implementing the ACEs Project's monitoring and evaluation plan as well as the Environmental Management Plan.
- (iv) The detailed activities of each ACE are provided in the Implementation Plan

12. **Each ACE will prepare an Implementation Plan.** This Implementation Plan will include the FM Manual and Procurement Manual will be the guiding plan for the ACEs for the implementation of the Project. This implementation plan will also include: (i) the terms of reference, functions and responsibilities for the members of the Implementation Teams or the personnel of the ACEs working on the Project; (ii) the Procurement Procedures Manual; (iii) the Financial Management Procedures Manual; (iv) the indicators to be used in the monitoring and evaluation of the Project; (v) the criteria, detailed rules and procedures for the EEPs; (vi) the detailed content of the EEP Spending Report, the customized statements of expenditures, the interim financial reports, the Procurement Plan Progress Report and the Project Reports; (vii) flow and disbursement arrangements of Project funds; and (viii) the Disbursement-Linked Indicators. This Implementation Plan can be amended during the project life-time provided the ACE obtains approval from the World Bank.

13. **Institutional capacity:** As part of Project preparation, institutional assessment of the capacities of the ACEs was undertaken. This entailed a full fiduciary assessment of its financial management, procurement and environmental management capacities. Funding from within the ACE grant is planned to support ACE institutional and implementation capacity. Further, a

regional capacity building plan on the ACE project teams will be developed at the launch workshop. This joint development of the regional workshop seeks to ensure full awareness of the project requirements, assessment of each ACE's capacity shortcomings and challenges. The implementation risks of the selected ACEs are addressed in the implementation support capacity plan. These risks include: (i) faculty inertia, (ii) lack of incentives, (iii) overly cumbersome processes, (iv) demand for bribes for facilitating the process, (v) lack of knowledge of the process, and (vi) lack of decentralization within the university.

II. Regional Facilitation Unit (hosted within the Association of African Universities)

14. The RFU will be hosted within the AAU. The AAU will be responsible for implementing sub-component 2.1 of the project that entails supporting the aggregation of the M&E reports for the ACEs as well as capacity building on project management for the ACEs and capacity building within higher education. This will also include support to develop baselines, and as required consultancies for independent verification of M&E reports.

15. **The AAU has met the criteria required to be selected as the technical agency for the regional project.** Those criteria were: (i) proven capacity to handle IDA and other donor funds; (ii) established working relationships with higher education institutions; (iii) evidence of experience in working across sectors; (iv) evidence (based on due diligence assessment) of well-established financial management systems; and (v) evidence of regional coverage across thematic areas (vi) evidence of bilingual capacity, see Annex 7 for a full list of the criteria. Following project preparation consultations with the Africa Advisory working group and the participating countries and universities, the AAU was selected as the agency to host the RFU. All countries who have expressed interest to participate in the project have provided a no-objection to the AAU hosting the regional facilitation unit.

16. A summary of the tasks of the RFU:

- (i) facilitate the project preparation of the project in selection of institutions
- (ii) ensure effective and efficient coordination and facilitation of the project activities
- (iii) support the monitoring and evaluation needs of the selected ACEs as well as aggregated M&E needs of the overall project
- (iv) coordinate and fund the activities of the ACE Steering Committee to deliver its tasks.
- (v) be responsible for overseeing implementation of tasks outlined in Component 2
- (vi) managing the administrative aspects of the project with regards to regional activities
- (vii) regular communication with ACEs and reporting
- (viii) be responsible for overseeing implementation of cross-cutting intervention tasks such as policy studies
- (ix) quarterly meetings between ACEs and Regional Facilitation Unit.
- (x) prior to the supervision missions, semi-annual reports on Project implementation will be prepared by the ACEs with the support of the RFU.
- (xi) facilitate sharing of experiences across aspiring ACEs, such as knowledge sharing workshops for the ACEs and partner institutions
- (xii) Promote partnerships between ACEs and between ACEs and partner institutions.

17. The detailed list of tasks is available in the Project Regional Operations Manual.
18. **A Financing Funding Agreement between the Bank and the RFU will define the terms and conditions for this engagement.** Funding for the RFU will be under Component 2. The RFU's main task is to facilitate project coordination and support implementation of the ACEs. The RFU will have a project facilitator who will have full management responsibility for facilitation of the project. The RFU will also have professional staff with the accounting, M&E and project management skills requisite for Project needs. The RFU will mainly consist of project coordinating and M&E staff as the execution of the project activities will undertake by the selected institutions themselves. Funds under Component 2.1 will be disbursed to the RFU against an agreed work plan and procurement plan agreed upon with the ACEs and the Bank. The Regional Facilitation Unit will report to the ACEs and the Bank through semi-annual meetings.
19. **RFU composition and capacity:** The RFU consists of a team of existing AAU staff, notably the overall responsible for the RFU (Secretary General of AAU), a project coordinator, M&E officer, project officer, ICT and communication officers. The existing AAU officers will be financed on a part time basis in functioning to the time that the officers work on the project. In addition, the AAU staff will be augmented with project-hired consultants, including a deputy project coordinator, and consulting firms as per needs. As part of Project preparation, a financial management assessment and procurement assessment of AAU was undertaken. Further AAU successfully organized the project proposal evaluation which involved substantial logistics and coordination. The key challenges are early and consistent planning and agreement between the various participating organizations, including the Bank. This will give AAU sufficient lead notice to plan and execute project activities in a timely manner.
20. **The RFU will be responsible for developing the Project Regional Operations Manual.** This manual will be the the overall project operations manual, in which it will guide the overall structure and implementation of the project. This will include (i) the terms of reference, functions and responsibilities for the members or the personnel of the Regional Steering Committee, the National Review Committee and the Implementation Team; (ii) the procedures for procurement of goods, works, non-consulting services, consultants' services, Operational Costs, and Training, as well as for financial management and audits under the Project; (iii) the indicators to be used in the monitoring and evaluation of the Project; (iv) the criteria, detailed rules and procedures for the EEPs; (v) the terms of reference for the Independent Verifiers, the detailed content of the EEP Spending Report, the customized statements of expenditures, the interim financial reports, the Procurement Plan Report and the Project Reports; (vi) flow and disbursement arrangements of Project funds; and (vii) the Disbursement-Linked Indicators. This Project Regional Operations Manual may be amended from time to time with the World Bank's prior approval.

III. ACE SC

21. **The role of the ACE SC is to oversee and guide the project.** The ACE Steering Committee will also be responsible for advocating for regional collaboration in higher education, and act as a liaison between the project and regional leadership as well as with the public at large. The ACE Steering Committee will be supported by the RFU. The ACE SC will meet twice a year.
22. **The tasks of the ACE Steering Committee are:**

- (i) Strategic decisions to ensure the continued coherence between the program support and sector development and regional development priorities;
- (ii) Decisions concerning deviations from the program support document;
- (iii) Consider the findings and recommendations of the IEC (as facilitated by the RFU) in making the final selection of the ACEs;
- (iv) Review and guide the of overall progress of the program with a special focus on delays, problems and bottlenecks (approval of progress and financial reports, decisions on follow-up activities presented by RFU);
- (v) Overseeing the implementation of cross-cutting issues as identified in the program support document, e.g. gender and diversity; during implementation visit institutions and provide consultations and improvements
- (vi) facilitate national, regional, and international networking and outreach activities for the program as a whole;
- (vii) review the extent and performance of ACE collaboration;
- (viii) review and guide university industry linkages;
- (ix) review and approve capacity building plan of component 2.3;
- (x) overseeing audits (approval of the annual audit, overseeing follow-up on recommendations in the annual audit report presented by RFU)

23. The full Terms of Reference are provided in the Regional Operation Manual.

24. **Composition of the ACE SC** will be such that it will have representation of each country participating in the project. The ACE Regional Steering Committee was established by stakeholders in consultation with the World Bank as part of project preparation. The ACE Regional Steering Committee consists of approximately 14 members including the following members:

- (i) Representation of government/Ministry of Higher Education of each participating country (8 representatives)
- (ii) Representation by academic experts of international stature representing the disciplines covered under this program. (2 academicians)
- (iii) Representatives from the private sector (2 private sector representatives)
- (iv) Representatives of the ACEs (1 Vice chancellor representing the selected ACEs)
- (v) Representative from ECOWAS (1)

25. **The Procedures of the ACE Regional Steering Committee meetings are determined by the Committee itself.** As agreed in the first meeting, each meeting will be chaired by a Chair Person who will represent the business community within the sub-region and have experience within the STEM, health sciences and/or agriculture sciences. The Committee makes decisions on a majority basis. Decisions are subject to the agreed project objective, Project Regional Operations Manual, and financing agreements as agreed between the Bank, the governments and the AAU. The Steering Committee will be able to co-opt external members and advise as it sees fit.

26. **The ACE Regional Steering Committee will have an appropriate budget under Component 2 to perform its functions.** Members of the ACE Steering Committee will all have a reasonable travel expenditure covered and per diem but not receive honorarium. The RFU will serve as the secretariat for the ACE Steering Committee.

IV. ACE National Review Committee

27. Project implementation support and supervision at the national level would be undertaken by the ACE National Review Committee. The mandate will be to receive and review reports, work plans and budgets funded under Component 1 for the ACE(s) in that country. It will be to oversee and guide project implementation and approve the performance and funding contract, the ACE-specific Implementation Plan, the annual work plan, procurement plan and the budgets for the ACEs in that country. The specific tasks comprise of:

- (i) Undertake annual performance and progress reviews for the selected ACEs in the country;
- (ii) Approve annual work plans for the coming year including budget plans, and procurement plans for each ACE(s);
- (iii) Overseeing audits (be informed about the terms of reference for the annual audit, and oversee follow-up on recommendations in the annual audit report presented by the selected ACEs in case the individual university oversight mechanisms are not adequately overseeing the audits);
- (iv) Review the adherence of national procurement and financial management guidelines for each ACE(s);
- (v) Approve reporting of DLI results and related withdrawals applications;
- (vi) Discuss alignment to national strategies and support the ACE foster linkages with relevant governmental bodies;
- (vii) Outline good practices;
- (viii) Recommend changes to ACE Implementation Plan and decision for the ACE Steering Committee; and
- (ix) Monitoring of overall progress of the program with a special focus on delays, problems and bottlenecks (approval of progress and financial reports, decisions on follow-up activities presented by the selected ACEs)

28. The detailed Terms of Reference are available in the Project Regional Operations Manual.

29. **Composition of the National Review Committee** will include representation from the Ministry and/or agency responsible for higher education, which is expected to be the chair and convener, related Ministries of the selected ACEs, Ministry of Finance and the selected ACEs. The National Committee will have approximately 5-7 members. This committee will meet semi-annually. Composition and ToRs can vary between countries. The model ToRs are found in the Project Regional Operations Manual.

30. The ACE representatives will pay for their own travel and expenses through the project, with RFU out of Component 2 and the government representatives will be government financed. Minor logistical and review expenses for the preparation and conduct of meetings of the National Review Committee will be financed and managed by the ACEs. Such expenditures should be clearly identified. Capacity building of National Review Committee member can only be undertaken via the RFU.

V. Specific Implementation Arrangements for Nigeria.

31. Given that 10 of the 19 selected centers of excellence are located in Nigeria, implementation arrangements for Nigeria will follow the project arrangements outlined above with the addition that the National Universities Commission will undertake fiduciary and administrative coordination and support to the Nigerian ACEs. The Federal Project Financial Management Division (FPFMD) in the Office of the Accountant General of the Federation will be responsible for establishing and maintaining acceptable financial management arrangements to implement Component 2.2. FPFMD will also be responsible for preparing and submitting withdrawal applications to the Bank for the Federal Universities under Component 1 after the National Review Committee has cleared for disbursement. The private Universities will submit withdrawal applications directly to the Bank.

VI. Specific Implementation Arrangements for The Gambia

32. The Gambia implementation arrangements will be led by MOHERST, which is responsible for coordinating the capacity needs in The Gambian institutions. The fiduciary and administrative support will be undertaken by the PCU which lies currently within the Ministry of Basic and Secondary education. The National Technical Committee shall provide oversight for the Project and hold semi-annual reviews of performance and implementation, with the Focal team in charge of the implementation, coordination and monitoring

VII. Role of Partners

33. **The project benefits from strong attention and support from development and academic partners.** Various development partners have expressed interest in advancing and scaling up existing support within higher education either project-wide or in specific sectors or countries that they are supporting. This support, interest and commitment from partners has already been highly beneficial in the preparation phase, and could further be developed into a tremendous asset to the project, the ACEs, government, and the Bank. Partners bring TA and funding for TA to the program that can help ACEs achieve the results of the project. At the same time, the project provides substantial investment and incentives for the ACEs to achieve the results, those raising the probability of success and win-win situations.

34. **The following types of partnerships with identified partners are currently planned:**

- Financial support to additional ACEs under the same framework. The team is exploring this option with multilateral and bilateral partners.
- Capacity building of ACEs. Most notably, Carnegie Corporation has been very active with regional capacity building in selected universities within areas critical to the achievement of this project. Areas include: fundraising and establishment of endowment funds through a Carnegie grant to CASE; tapping into the potential of Diaspora researchers; Improving university governance and management; and improving monitoring and evaluation of key institutional performance indicators through a grant to University of Western Cape. Further, Carnegie Corporation has been strongly involved in the consultations on project design given their knowledge and experience in supporting higher education within Africa and the above collaboration within the project. The project through AAU will work with Carnegie and its grantee to coordinate capacity

building. AAU has also worked with Wageningen University on potential options for knowledge management and sharing among universities with the ACE project.

- TA to ACEs within specific sectors or focus areas. Additionally, AUSAID through their Africa Mining Skills Initiative (AMSI) are providing technical support to improved proposals of centers of excellence selected within the extractive industries Agriculture research networks such as Agreenium, CIRAD and RUFORUM have also expressed interest in supporting the proposal improvement process of the selected centers of excellence. These sector specialized partners bring sector specific TA and connections to the relevant ACE that the Bank team cannot always provide.
- Drawing in expertise from the African academic diaspora outside of Africa. A large number of highly qualified Africans teach and conduct research in North America, Europe and elsewhere. They are highly committed and willing to support scientific and education improvements in Africa, but require a serious framework in which they expertise is needed and put to use. As part of the evaluations, AAU and the project successfully relied upon this highly qualified and committed expertise familiar with the African scientific, linguistic and cultural context. The project will seek to continue this engagement through advisory committees and as part of the supervision.
- Complementary regional capacity strengthening. For example, DAAD, the German Academic Exchange service, support national and regional capacity building within quality assurance. This is highly complementary to the regional policies supported through this project and to the expected results for each ACE to meet external quality assurance benchmarks.
- Potential collaboration partnership with new development partners, including Brazil, China, India, and Korea through the Partnership for Applied Science, Engineering and Technology.
- Strengthening existing partnerships between the ACEs and international research and university institutions from North and South America, Europe, and Asia. The ACE project finance in many cases, a scaling up or continuation of successful partnerships financed through previous bilateral collaboration, including potential collaboration with Nuffic, RISE, and others.

Financial Management, Disbursements and Procurement

35. A Financial Management (FM) assessment was conducted on the FM arrangements for the Africa Higher Education Centers of Excellence Project. The project will be implemented by the following institutions for which a FM assessment has been conducted:

Component	Country	Institution	Africa Center of Excellence (ACE)
1	Burkina Faso	Institut International d'Ingénierie de l'Eau et de l'Environnement (2iE)	Centre d'Excellence pour la formation et la recherche en Sciences et Technologies de l'Eau, l'Energie et l'Environnement en Afrique de l'Ouest et du Centre
1	Benin	University of d'Abomey-Calavi	Centre d'Excellence Africain en Sciences Mathématiques Appliquées du Bénin
1	Cameroon	University of Yaounde 1	The Centre d'Excellence en Technologies de

Component	Country	Institution	Africa Center of Excellence (ACE)
			l'Information et de la Communication
1	Senegal	University of Cheikh Anta Diop, Senegal	Sante de la Mere et de l'Enfant
1	Togo	University of Lome, Togo	Centre d'excellence régional sur les sciences aviaires
1	Ghana	University of Ghana	West African Centre for Crop Improvement.
1	Ghana	University of Ghana	West African Center for Cell Biology of Infectious Pathogens
1	Ghana	Kwame Nkrumah University of Science & Technology (KNUST)	Regional Centre of Excellence for Water and Environmental Sanitation
1	Nigeria	Redeemers University, Mowe, Ogun State	African Centre of Excellence for Genomics of Infectious Diseases
1	Nigeria	African University of Science and Technology, Abuja, Nigeria	PAN African Materials Institute
1	Nigeria	Federal University of Agriculture, Abeokuta, Nigeria	Centre for Agricultural Development and Sustainable Environment
1	Nigeria	Ahmadu Bello University, Zaria, Nigeria	Centre of Excellence on Neglected Tropical Diseases and Forensic Biotechnology
1	Nigeria	University of Jos, Nigeria	Phytomedicine Research and Development
1	Nigeria	University of Benin, Nigeria	Centre for Excellence in Reproductive Health and Innovation
1	Nigeria	University of Port Harcourt, Nigeria	ACE Centre for Oil Field Chemicals
2	The Gambia	The PCU at Ministry of Basic and Secondary Education (MoBSE)	N/A
2	Regional Institution based in Ghana	Regional Facilitation Unit (RFU) based at the Association of African Universities (AAU)	N/A

36. The objective of the assessment was to determine whether the implementing entities have acceptable financial management arrangements in place that satisfy the Bank's Operation Policy/Bank Procedure (OP/BP) 10.00. These arrangements would ensure that the implementing entities: (i) use project funds only for the intended purposes in an efficient and economical way; (ii) prepare accurate and reliable accounts as well as timely periodic financial reports; (iii) safeguard assets of the project; and (iv) have acceptable auditing arrangements. The FM assessment was carried out in accordance with the Financial Management Manual issued by the FM Sector Board on March 1, 2010.

37. Important to note is that the Federal Government of Nigeria will fund three additional ACEs, and the National Universities Commission. These implementation units will follow the same modality of FM assessment that the 15 ACEs and the other implementation agencies under Component 2 have undertaken. The three ACEs are:

1. OAU Knowledge Park: A Model for National Science Technology and Knowledge Park Initiative Obafemi Awolowo University, Ile- Ife, STEM.
2. African Centre of Excellence ACE in Dryland Agriculture, Bayero University, Kano, Agriculture.
3. Centre for Food Technology and Research (CEFTEP), Benue State University, Makurdi, Agriculture

Institutional and Implementation Arrangements

38. The 19 ACEs, MoBSE in Gambia and AAU will be responsible for the overall implementation of the Africa Higher Education Centers of Excellence Project. Their accounting

officers who will assume overall responsibility for accounting of the project funds will be the Head or Leader of the ACE, Permanent Secretary for the MoBSE in Gambia and Chief Executive Officer for AAU. The institutions will be responsible for project implementation including maintaining satisfactory FM arrangements throughout the life of the project. This will involve the 15 ACEs working closely with their University's to ensure satisfactory FM arrangements are maintained during the project's life. The institutions will constitute the operational links with IDA on matters related to the implementation of the project.

Planning and Budgeting

39. **Budget Guidelines and Procedures:** Budgets for the 15 ACEs will follow guidelines/procedures/policies issued by their Universities that take into consideration in some cases guidelines/regulations and Acts of their respective governments. Similarly, MoBSE in Gambia and AAU will follow their own guidelines with respect to budgeting. Other project specific budgeting guidelines will be included in each ACE's Implementation Plan that will be a condition of effectiveness. Key aspect of budgeting for all institutions implementing this project is to prepare and approve budgets before the commencement of the financial year they relate too such that there is no hindrance of implementing programs due to having unapproved budgets. The other key aspect is to monitor budgets on a quarterly basis using interim financial reports (IFRs) and ensure that where there are variances between actual and budgeted amounts, significant variances are explained and appropriate action taken by management. Budget guidelines for all implementing entities were assessed and deemed as adequate.

40. **Specific budget requirements related to component one** will involve the budget of the ACE project being included in the government approved budget through the Ministry of Higher Education's budget. The budget for the ACE project will be funded using external funding and government resources were applicable. The budget will need to be supported with an agreed annual work program that will be recorded and monitored by the government and IDA under the Financing Agreement.

41. **Staffing:** Staffing to prepare and monitor budgets for all implementing entities, have been assessed as adequate but this will be strengthened by additional accountants to be recruited in some of the ACE Universities as documented under the accounting arrangements. However, it will be essential to train all staff on good practice FM arrangements for World Bank projects that include budgeting arrangements.

42. **Budget Information Systems:** Most implementing entities have an information system that can be utilized for budgeting purposes except for those highlighted under the accounting information systems which will need to be acquired or upgraded within six months after effectiveness.

Accounting Arrangements

43. **Financial Management Manual (FMM):** This is essential as it documents the accounting and other financial management arrangements that will be utilized for the project. All implementing entities have adequate FMMs documented in their guidelines/procedures/policies and supplemented were applicable in government legislation (Acts) and regulations except for the following:

- University of Cheikh Anta Diop, Senegal that needs to have the university FMM updated to cater for the ACE project; and
- University of Yaounde I, Cameroon; University of d'Abomey-Calavi, Benin; and University of Lome, Togo that need to update their FMMs to strengthen their accounting procedures.

44. All the FMMs of the implementing entities will have adequate FM guidelines for the project. The FMM will be complemented by, and annexed to, the Implementation Plan (IP) for each ACE. This IP that must be approved by effectiveness.

45. **Accounting staff:** These are essential as they will prepare accounts for the project. All implementing entities that have adequate staff have assigned an accountant for the project. The implementing entities that need to strengthen their accounting staff members by ensuring they are recruited within three months of effectiveness include:

- University of Yaounde 1, Cameroon that will need to recruit an additional accountant preferably familiar with accounting for donor projects to strengthen the staffing arrangements for CETIC given the existing workload to support the Public Accountant who reports to the Financial Controller.
- University of Ghana, WACCI which is semi-autonomous that will need to recruit an additional accountant who is professional qualified and experienced to support the Finance Officer due to workload concerns as this was being mitigated by use of short term national service persons.
- University of Cheikh Anta Diop, Senegal that needs to recruit an additional qualified and experienced accountant given the workload of the current staff to have adequate staffing arrangements for the project.

46. In order to ensure the ACEs have professionally qualified accountants, opportunity should be granted to the staff that need to enhance their skills to become professional accountants in the ACE universities. The Bank will also enhance the skills of the existing staff by training them in World Bank Financial Management and Disbursement requirements/procedures.

47. **Accounting Information systems:** Computerized accounting information systems are essential as they ensure efficiency in the preparation of accounts and avoid errors associated with a manual system where mainly Microsoft Excel spreadsheets are utilized. All the implementing entities have adequate computerized accounting systems except for the following that need strengthening systems within six months after effectiveness:

- ACE universities who have computerized information systems but they need upgrading to computerize the accounting process include Federal University of Agriculture, Abeokuta, Nigeria¹ and University of Lome, Togo².

¹ Federal University of Agriculture, Abeokuta, Nigeria needs to upgrade its Admon accounting software to cater for unique project requirements as some reports are produced using Microsoft Excel e.g. Fixed Asset Register.

² Université de Lomé, Togo accounting information system needs to be upgraded in order to produce comprehensive and reliable financial statements that include a balance sheet showing assets and liabilities.

- ACE universities without accounting information systems that need to be acquired and staff trained include University of Yaounde I (CETIC), Cameroon; University of Cheikh Anta Diop, Senegal; and University of d'Abomey-Calavi, Benin.
- ACEs universities currently without accounting computerized information systems but implementation of the information systems are underway to enhance the accounting process are Ahmadu Bello University, Zaria³, Redeemers University⁴ and University of Benin⁵ all in Nigeria.
- University of Port Harcourt, Nigeria will need to strengthen the capacity of the team managing the accounting information system (Peachtree) as their capacity is low.

48. **Accounting basis:** the accounting basis for the implementing entities is documented below:

Country/ Implementing Entity	Accounting Basis		
	Cash Basis	Accrual Basis	Modified Cash Basis
Institut International d'Ingénierie de l'Eau et de l'Environnement (2iE)		♣	
University of d'Abomey-Calavi, Benin	♣		
University of Yaounde I (UYI)	♣		
University of Cheikh Anta Diop, Senegal		♣	
University of Lome, Togo	♣		
University of Ghana (UG) – WACCI			♣
University of Ghana (UG) – WACCBIP			♣
Kwame Nkrumah University of Science & Technology (KNUST)			♣
Redeemers University, Mowe, Ogun State		♣	
African University of Science and Technology, Abuja, Nigeria		♣	
Federal University of Agriculture, Abeokuta, Nigeria	♣		
Ahmadu Bello University, Zaria, Nigeria	♣		
University of Jos, Nigeria	♣		
University of Benin, Nigeria	♣		
University of Port Harcourt, Nigeria	♣		
The PCU at Ministry of Basic and Secondary Education (MOBSE)	♣		
Regional Facilitation Unit (RFU) based at the Association of African Universities (AAU)			♣

Internal Control and Internal Unit

49. **Internal Control Arrangements:** The management of each implementing entities is responsible for the effectiveness of the system of internal controls. This responsibility will

³ Ahmadu Bello University, Zaria, Nigeria is implementing an in-house software package and training has been done for its staff.

⁴ SAGA ERP being implemented since April 2003 and expected to be operational by March 31, 2014.

⁵ Installation of Oracle Financial systems is in progress at the University of Benin in Nigeria. Staff members need training on how to utilize the system and chart of accounts needs improvement or alignment with national chart of accounts.

include making sure that: (i) project funds are utilized efficiently, economically and only for the intended purposes; (ii) financial reports generated by the accounting system are prepared on time, accurately and that they are reliable; and (iii) the assets acquired with project funds are safeguarded from misuse, defalcation, conversion and other forms of misappropriation.

50. The system of internal controls in operation follows those defined in the FMM of all the implementing entities except for those that need strengthening as documented above. The internal control systems will be enhanced with project specific control systems documented in the PIP.

51. During the assessment of the ACEs, it was noted that some ACEs need to improve their internal control systems. For example, banks reconciliations are not prepared on time and variances between actual and budgeted expenditure are not explained in a timely manner at Ahmadu Bello University and African University of Science and Technology both in Nigeria. Fixed assets at Ahmadu Bello University are not coded which renders physical verification of assets difficult while at African University of Science and Technology, fixed asset records are not kept up to date. Some of the universities are also not implementing recommendations made by internal auditors in a timely manner e.g. Jos University, Nigeria. These issues need to be addressed as part of being a center of excellence.

Internal Audit Arrangements

52. **Internal Audit function:** Performance of adequate internal audit is a disbursement-linked result. All implementing entities have adequate internal audit staffing arrangements except for University of Cheikh Anta Diop, Senegal and African University of Science and Technology, Abuja, Nigeria. It is suggested that these institutions will need to recruit an internal auditor in order to adequately carry out internal audits for the project. The Regional Facilitation Unit (RFU) based at the Association of African Universities (AAU) outsources its internal audit function. Periodically and as part of the monitoring and supervisory role of AAU, there will be an internal auditor attached to the monitoring teams and the report must include an annex on risk and fiduciary risk. With regard to University of Yaoundé 1, Cameroon, there is no internal audit unit but this function is being done by the Directorate of Budget of Ministry of Finance that performs periodic control reviews and the Technical Inspectorate Division of Higher Education. With regard to University of d'Abomey-Calavi, Benin and University of Lomé, Togo, the internal audit function will be performed by the General Inspectorate of Finance. All internal audit units should include in their work plans audits to be done on the project based on a risk based approach.

53. The Bank will encourage all implementing entities to strengthen their internal audit functions by increasing staff where there are work load concerns in the internal audit units; strengthening the internal audit manuals with good practices issued by the Institute of Internal Auditors e.g. as requested by University of Port Harcourt, Nigeria; acquire internal audit software to be more efficient and effective when conducting audits; train in performance auditing to strengthening value for money auditing; train in risk based auditing to strengthen internal audit skills e.g. as requested by University of Benin and Federal University of Agriculture, Abeokuta, both in Nigeria. Internal audit units should be encouraged to report at least on a quarterly basis on the project given that the assessment noted that in some ACEs, the reporting period was not defined e.g. for Ahmadu Bello University, Nigeria.

54. **Audit committees:** These committees are essential to ensure that there are audit issues are brought to high level attention and addressed. The committees are made up of non-executive members, including University Council member. All implementing entities do not have audit committees except for University of Benin, Nigeria that has an Audit and Risk Management Committee and University of Ghana that has an Audit Review Implementation Committee. Formation of Audit Committees, or a formally constituted sub-group of the University Council with Council members to examine audits, is an element of good corporate governance to ensure management addresses audit issues. Therefore, this will be a DLI for the ACEs to encourage them to improve on their governance arrangements. Internal auditors will be expected to report to them functionally and report administratively to the Head of the Institution e.g. Vice Chancellor or the Rector for the ACEs.

Governance and Anti-corruption arrangements

55. All implementing entities are encouraged to do the following to improve on their governance and anti-corruption arrangements:

- Put in place an independent complaint handling mechanism where complaints will be made and responded to with a good recording system to show the related details including the time the complaint was reported and the time the response was made.
- Form committees that deal with risk management and anti-corruption such that governance and anti-corruption arrangements can be independently dealt with by a non-executive committee. During the assessment, we noted that University of Benin, Nigeria has an eleven man audit and risk management committee that is also responsible for anti-corruption and transparency monitoring and the Federal University of Agriculture, Abeokuta, Nigeria has a fifteen man anti-fraud and anti-corruption committee. These two are good examples that should be emulated by the other ACEs.
- Publish budgets, financial reports and audited accounts related to the project and for the institution on the websites to enhance transparency and accountability. This will be encouraged through an annual disbursement (DLR#3.4) linked to the web-publication of these financial management reports.

Funds Flow Arrangements

56. **Bank Accounts:** The following bank accounts will be opened for all implementing entities:

- (a) **Designated Account:** ACEs, AAU and MoBSE in Gambia to open Designated Accounts (DA) in either United States Dollars or F CFA in a central bank or commercial bank acceptable to IDA. Specific details of the currency of the DA and where it will be located, that is central or commercial bank are shown in the table below.
- (b) **Project Account** will be opened for funds to be received by the ACE sent by the Ministry of Finance or funds received in a DA denominated in foreign currency and there is need to open an account in local currency to make payments in that currency. The Project Account will be opened at a commercial bank acceptable to the IDA or the Central Bank depending on national and university procedures/guidelines. This account will also serve as the depository for government counterpart fund contributions were

applicable. Funds sent to the ACE Project Account will be used for ACE eligible investments.

57. There will be at least two signatories required for each approved payment from the above accounts subject to national and university procedures/guidelines. The two signatories should come from two categories. The first category should comprise of the project's management and the second, the staff accounting for the project's funds. The signatories will be communicated to the IDA together with the bank account details after the signing of the project but before the project's effectiveness. The funds from both bank accounts must be used only for eligible expenditures.

Summary of Funds Flow

ACE	Funds Received			
	DA currency	Location of DA	Directly from IDA to ACE	Through Ministry of Finance to ACE
Institut International d'Ingénierie de l'Eau et de l'Environnement (2iE)	F CFA	Central Bank		♣
University of d'Abomey-Calavi	F CFA	Central Bank		♣
University of Yaounde 1 (UY1)	F CFA	Central Bank		♣
University of Cheikh Anta Diop, Senegal	F CFA	Central Bank		♣
University of Lome, Togo	F CFA	Central Bank		♣
University of Ghana (UG)	USD	Central Bank		♣
University of Ghana (UG)	USD	Central Bank		♣
Kwame Nkrumah University of Science & Technology (KNUST)	USD	Central Bank		♣
Redeemers University, Mowe, Ogun State	USD	Commercial Bank	♣	
African University of Science and Technology, Abuja, Nigeria	USD	Commercial Bank	♣	
Federal University of Agriculture, Abeokuta, Nigeria	USD	Central Bank		♣
Ahmadu Bello University, Zaria, Nigeria	USD	Central Bank		♣
University of Jos, Nigeria	USD	Central Bank		♣
University of Benin, Nigeria		Central Bank		♣
University of Port Harcourt, Nigeria	USD	Central Bank		♣
The PCU at Ministry of Basic and Secondary Education (MOBSE)	USD	Commercial Bank	♣	
Regional Facilitation Unit (RFU) based at the Association of African Universities (AAU)	USD	Commercial Bank	♣	

58. **Eligible Expenditure Programs (EEPs):** This will relate to only component one and shall primarily comprise of ACE staff salaries or other non-procurable operational costs of the program. These costs will be verified by internal audit before submission for reimbursement to IDA.

59. **Component 1 Funds Flow arrangements:** Upon credit effectiveness, this will be as follows:

1. The ACE will submit information to the National Review Committee regarding the achievement of the preparation and qualification results (DLI1 – Year 0). Further, the

ACE will certify that it has the required background information in its archives to document the achievements of the results.

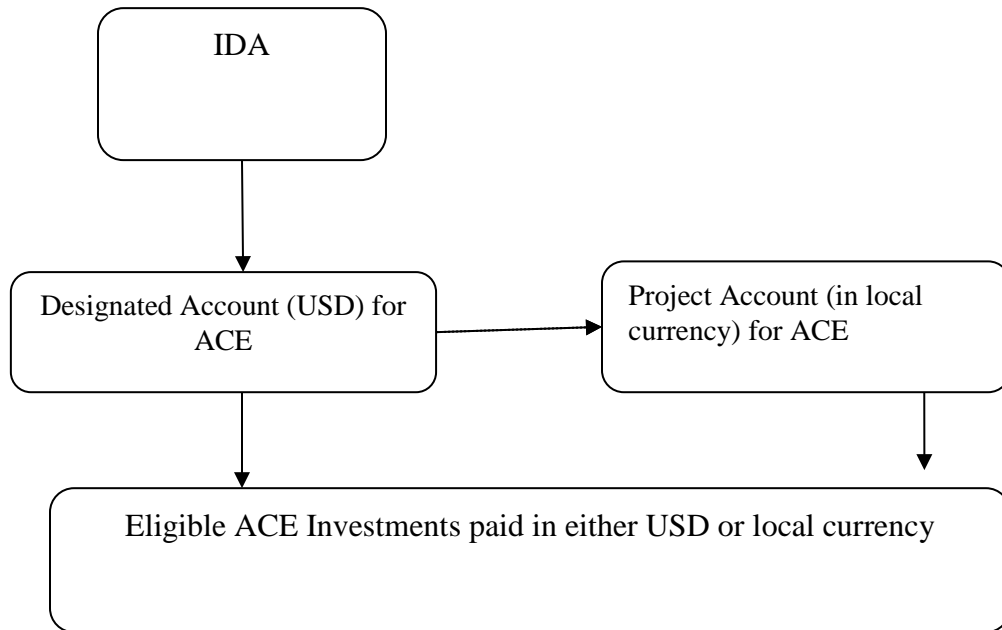
2. The Government through the National Review Committee will review and submit information to the World Bank with copy to the AAU regarding the achievement of the preparation and qualification results (DLI 1 – Year 0). This information will be supplemented with expenditures in the Eligible Expenditure Program (primarily salaries). This first disbursement is planned to amount to 10% of the agreed ACE support. The information submitted to the World Bank should be accompanied with a reimbursement withdrawal application.
 3. The World Bank will disburse funds for Year 0 results (to a project Designated Account in MoF).
 4. Ministry of Finance will transfer the funds using the regular budget process to the ACE Project Account at the university level.
 5. If additional funds are necessary for implementation, the government can request an advance of DLI#2 of up to 15 percent of the amount allocated to this DLI. This will only be possible for countries where there are no lapse loans. This will be an advance, and if results and eligible expenditures are not subsequently submitted to the World Bank, this advance will have to be refunded to the World Bank.
60. For each subsequent yearly disbursement (May 2015 – 2018), this will be as follows:
1. The ACE will compile the achieved results and certify that it has the required background information in its archives to document the achievements of the results.
 2. The ACE, ACE country focal point and the Ministry/Agency of Higher Education through the national review committee will review the results and submit information regarding the achievement of the project results for that year (Year 1-4). The information to submit consists of two parts: (i) ACE results in the form of the DLIs, and (ii) Expenditures in the eligible expenditure program (EEP).
 3. AAU (the regional facilitation unit) will together with the World Bank verify achievements, sometimes on a sample basis. This will be done after the Verification Agency, verifies the DLIs. Thereafter, World Bank will disburse the agreed funds for that year's results to the project's Designated Account in MoF. The disbursement will be made through submission of the withdrawal application with evidence of EEPs to be reimbursed and supporting DLIs achieved.
 4. Ministry of Finance will transfer the funds using the regular budget process to the ACE account at the university level.

Funds Flow Diagram for Component 1

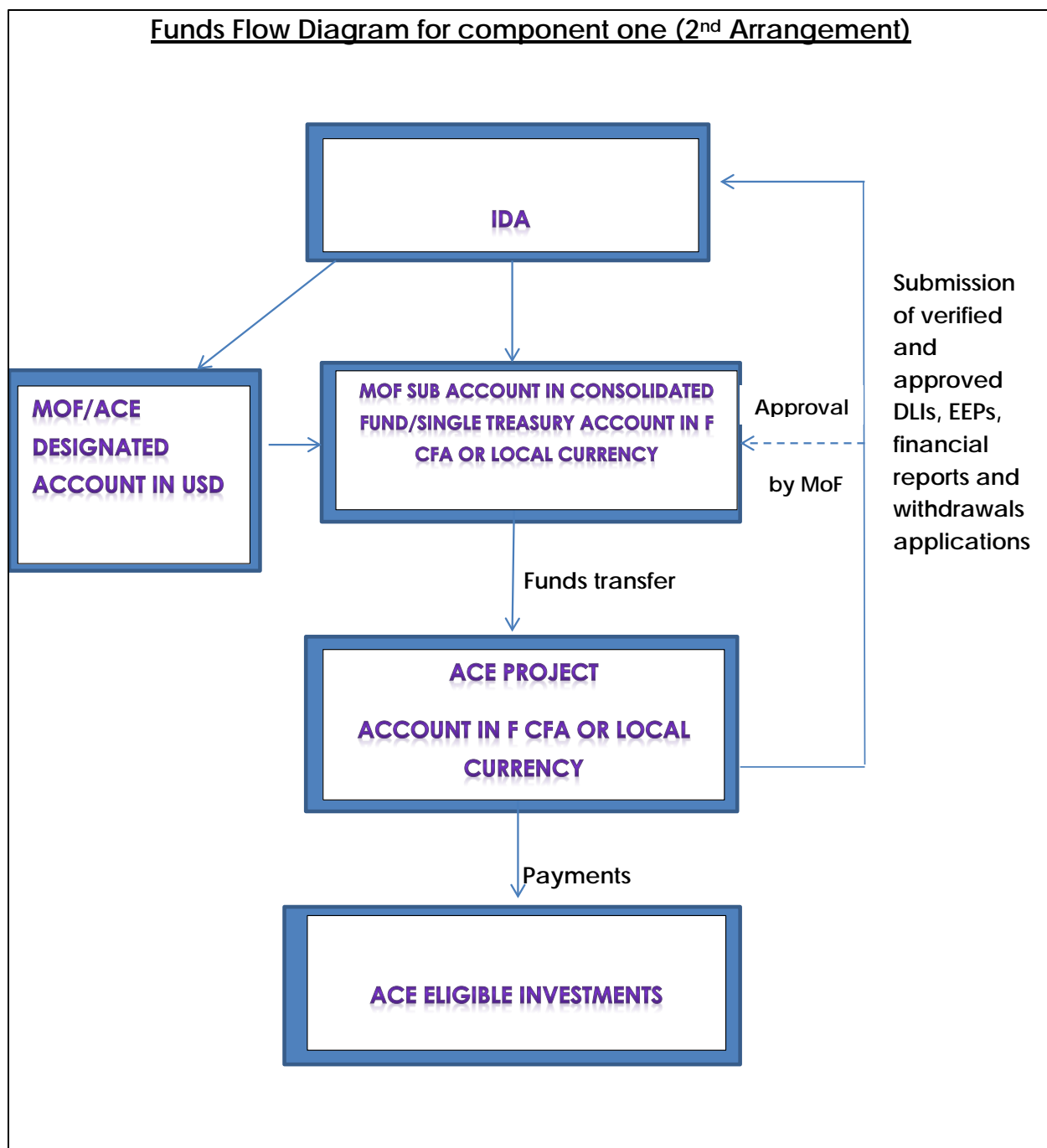
61. **Funds sent under component 1 will have two funds flow arrangements.** The first funds flow will relate to funds sent directly to the DA for the ACE. The funds flow table above shows that this will relate to Redeemers University, Mowe, and African University of Science and Technology, Abuja, Nigeria as they are private universities. These universities will have a Project Account denominated in local currency as the DA will be in United States Dollars.

Funds from the DA will be transferred to the Project Account as per acceptable national and university practice. The ACE can pay for eligible investments from either the DA or Project Account. The funds flow diagram for this arrangement is below:

1st Funds Flow Diagram for Component 1 – Direct Flow



62. **The second arrangement** is where funds will be disbursed to all the other ACEs to their DA located at the central bank under the control of the Ministry of Finance. For funds disbursed in USD, they will first be disbursed into a DA for the project denominated USD then transferred into a sub account (denominated in local currency) for the ACE project under the Ministry of Education, in the consolidated fund or single treasury account. For funds whose DA is F CFA, their DA will be a sub account for the ACE project under the Ministry of Education, in the consolidated fund or single treasury account. From the project's sub accounts, funds will be disbursed into the ACE project account under the control of the ACE. Funds from the ACE project account will be spent on ACE eligible investments. The funds flow diagram for this arrangement is below:

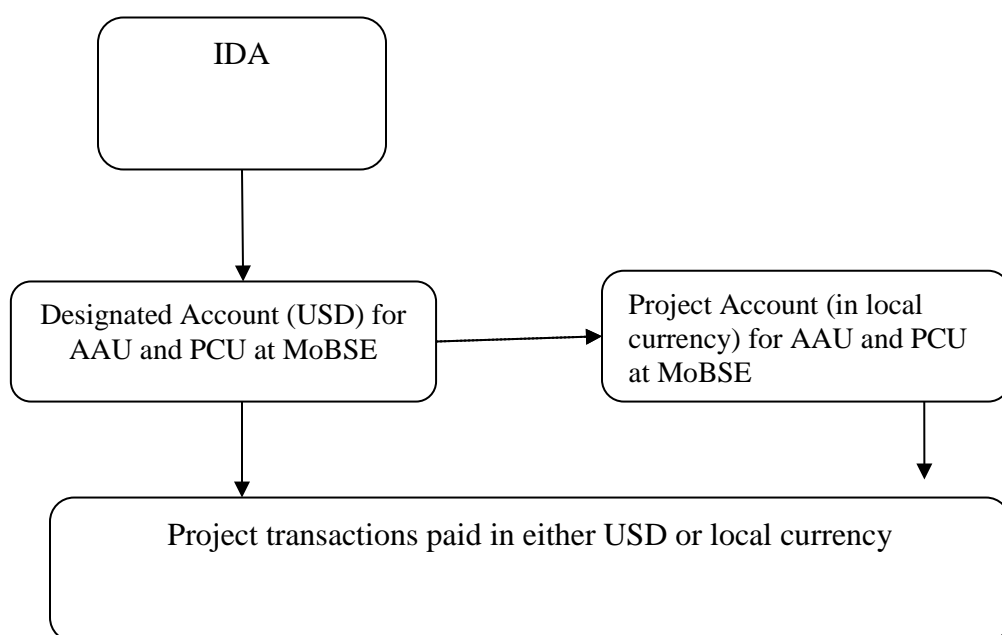


63. **Risk in the funds flow process:** Major risks are delays in the submission of withdrawal applications for reimbursement with supporting DLIs and delays in the transfer of funds by the Ministry of Finance to the ACE Project Account. These will be mitigated by having a DLI that encourages timely submission of withdrawal applications to the Bank for disbursement and having as part of the reports submitted to the Bank a commitment of the government to invest in the ACE through specific budget line; proof of funds transferred by MoF to the ACE; and proof of commitment for the next year. In addition, a timeline should be agreed between the MoF and

the ACE for funds to be transferred and documented in the contract between the government and the university/ACE.

64. **Component 2 funds flow arrangements:** AAU, NUC in Nigeria and MoBSE in Gambia will use the transaction based disbursement method. Upon effectiveness, they will be required to submit a withdrawal application for an initial deposit to the Designated Account in an amount to be specified in the Disbursement Letter. Replenishment of funds from the Bank to the Designated Account will be made upon evidence of satisfactory utilization of the advance, reflected in statements of expenditure (SOEs) and/or on full documentation for payments above SOE thresholds. These thresholds will be set in the disbursement letter. The supporting documentation for requests for direct payment should be records evidencing eligible expenditures (copies of receipt, supplier's invoices, etc.). Replenishment applications would be required to be submitted regularly on a monthly basis. Upon receipt of funds at the Designated Accounts in United States Dollars, funds can be transferred in local currency to the project accounts of the AAU and MoBSE in Gambia. Eligible payments related to the project can be made from the Designated and Project Accounts.

Funds Flow Diagram for Component 2.2 and 2.3



Disbursements Arrangements

65. **Disbursement under component 1 to the ACEs will be result-based.** This mode of disbursement will mainly be by reimbursement of certified EEPs supported with achieved DLI's and other relevant documentation. Advances to a maximum of 10% will also be disbursed under the result based method on condition that evidence of achieving results is subsequently provided to IDA. Component two will use the transaction based method of disbursement (Statements of Expenditure). Other methods of disbursements for component two will include reimbursement,

direct payment, and use of special commitment (e.g. letters of credit). If ineligible expenditures are found to have been made from the Designated and/or Project Account, the borrower will be obligated to refund the same. If the Designated Account remains inactive for more than six months, IDA may reduce the amount advanced. IDA will have the right, as reflected in the terms of the Financing Agreement, to suspend disbursement of the funds if significant conditions, including reporting requirements, are not complied with. Additional details regarding disbursement will be provided in the disbursement letters.

Disbursement per DLI and sub-component per country (in US\$ equivalent)

Country /entity	Benin, Burkina Faso Cameroon, and Togo	Senegal	Ghana	Nigeria	The Gambia	AAU
Component 1						
DLI Number						
DLI 1	800,000	1,600,000	2,400,000	7,250,000		
DLI 2	6,400,000	12,800,000	19,200,000	54,350,000		
DLI 3	400,000	800,000	1,200,000	3,600,000		
DLI 4	400,000	800,000	1,200,000	3,600,000		
Component 2						
Sub-Component 2.1					3,000,000	
Sub-Component 2.2				1,200,000		
Sub-Component 2.3						5,000,000
Total per country	8,000,000	16,000,000	24,000,000	70,000,000	3,000,000	5,000,000
TOTAL	32,000,000	16,000,000	24,000,000	70,000,000	3,000,000	5,000,000

66. **Retroactive financing.** For Burkina Faso, Benin, Cameroon, Ghana, and Togo there is the provision for retroactive financing up to 10 percent of the financing for payments made for the Eligible Expenditure Programs twelve months 12 months prior to the effectiveness date.

Financial reporting Arrangements

67. All implementing entities under Component 1 (ACEs) will submit semi-annual Interim Financial Reports (IFRs) while Component 2 will submit quarterly IFRs to IDA within 45 days of the end of the reporting period. The quarterly and semi-annual periods will follow the calendar year. The formats of these IFRs will be agreed with IDA as the timely submission of financial reports form part of the Disbursement Linked-Results. The IFRs will comprise of:

- Statement of Sources and Uses of Funds;
- Detailed Statement of Uses of Funds by Project Activity/Component; and
- Bank Statements for the Designated and Project Account and their reconciliation statements.

Other documentation that should be submitted with the withdrawal application for component one should include:

- Commitment of the government to invest in the ACE through a specific budget line;
- Money transfer proof of the previous tranche from the MoF to the ACE designated account;

- Proof of Commitment for the next year;
- ACE proof of results achievement; and
- Verified EEPs by the Internal Audit Department of the ACE.

68. All implementing entities will prepare annual accounts within three months after the end of the financial year in accordance with accounting standards acceptable to IDA. Thereafter all the implementing entities will be responsible for ensuring their reports are audited and submitted to IDA within six months after the end of the financial year.

External Audit Arrangements

69. **The external audit of the project's funds will be done by both the Supreme Audit Institutions and private audit firms acceptable to the IDA.** The Supreme Audit Institutions may contract acceptable private audit firms to IDA, to audit the project and this cost can be met as part of the project's operational expenditure. A table showing who audits each of the implementing entities is shown below. All audits should be carried out in accordance with International Standards on Auditing. All Terms of Reference for audits of the implementing entities will be agreed with IDA. The audit terms of reference for component one should at least, ensure all EEPs and ACE investments are audited. Audit reports together with management letters should be submitted to the World Bank within six months after effectiveness. The financial years for preparing audited accounts may follow the individual financial years of each of the implementing institutions or be synchronized to the financial year January-December of every year. Audit reports will be publically disclosed by the World Bank in accordance with the World Bank disclosure policy.

Summary of External Audits Arrangements for Implementing Entities

Country/ Implementing Entity	Audited by the Supreme Audit Institution	Audit by a Private Firm	Accounting year
Institut International d'Ingénierie de l'Eau et de l'Environnement (2iE)		▲	Jan.– Dec.
University of d'Abomey-Calavi, Benin		▲	Jan.– Dec.
University of Yaounde 1 (UY1), Cameroon		▲	Jan. – Dec.
University of Cheikh Anta Diop, Senegal		▲	Jan. - Dec.
University of Lome, Togo		▲	Jan. - Dec.
University of Ghana (UG) – WACCI	▲		Jan. – Dec.
University of Ghana (UG) – WACCBIP	▲		Jan. – Dec.
Kwame Nkrumah University of Science & Technology (KNUST)	▲		Jan. – Dec.
Redeemers University, Mowe, Ogun State		▲	Sept. – Aug.
African University of Science and Technology, Abuja, Nigeria		▲	Jan. – Dec.
Federal University of Agriculture, Abeokuta, Nigeria		▲	Jan. – Dec.
Ahmadu Bello University, Zaria, Nigeria		▲	Jan. – Dec.
University of Jos, Nigeria		▲	Jan. – Dec.
University of Benin, Nigeria		▲	Jan. – Dec.
University of Port Harcourt, Nigeria		▲	Jan. – Dec.
The PCU at Ministry of Basic and Secondary Education (MOBSE)		▲	Jan. - Dec.
Regional Facilitation Unit (RFU) based at the Association of African Universities (AAU)		▲	July-June

70. During the assessment, there were delays in some of the ACE universities finalizing the auditing of their financial statements e.g. the Federal University of Agriculture, Abeokuta; African University of Science and Technology, Abuja; University of Port Harcourt, all in Nigeria. This is a concern and the timeliness of finalizing the audit reports will need to significantly improve. We also noted that at the University of Abomey-Calavi, Benin and University of Lome, Togo, there were audit backlogs for the last two years (2012 and 2013) that need to be addressed before effectiveness of the ACEs.

Financial Management Action Plan

71. The action plan below indicates the actions to be taken for the project to strengthen its financial management system and the dates that they are due to be completed by.

	Action	Due by	Responsible
1	ACE Implementation Plan with Financial Management Manual: Prepare and agree to the ACE Implementation Plan with an approved Financial Management Manual. This ensures adequate accounting policies and procedures for the project.	Effectiveness Condition	All implementing entities
2	Audit Report backlog: University of d'Abomey-Calavi, Benin & University of Lome, Togo to address the backlog of audited accounts for 2012 and 2013. (included in PIP)	Effectiveness Condition	University of d'Abomey-Calavi, Benin & University of Lome, Togo
3	Accounting Staff: University of Yaounde 1 (CETIC), Cameroon; University of Ghana, WACCI; and University of Cheikh Anta Diop, Senegal that need to recruit a qualified and experienced accountant to strengthen accountability of project funds.	Within 3 months after effectiveness	University of Yaounde 1 (CETIC), Cameroon; University of Ghana, WACCI; and University of Cheikh Anta Diop, Senegal
5	Internal Audit. Internal Audit units are encouraged to report on a quarterly basis on the project using a risk based approach. Further, the Internal Audit units will include the project in their annual work plan to ensure audits are done based on a risk based approach. An annual report will be a Disbursement-Linked Result in the project.	Annually	All implementing entities
6	Audit Committee: Put in place a functional audit committee that will follow up audit recommendations to ensure they are addressed appropriately by management. This is a disbursement linked results for Financial Management.	Annually	All implementing entities (University of Benin, Nigeria and University of Ghana committee have this committee but their functionality will be monitored).
7	Transparency: Publish budgets, financial reports and audited accounts related to the project on the websites to enhance transparency and accountability. This is a Disbursement-Linked Result.	Annually	All implementing entities
8	Accounting information system: (a) University of Yaounde I (CETIC), Cameroon; University of Cheikh Anta Diop, Senegal; and University of d'Abomey-Calavi, Benin to acquire an accounting information system to prepare the project's accounts in an efficient and effective manner. This will also avoid errors in the accounts.	Within the first 6 months after effectiveness	(a)University of Yaounde I, Cameroon; University of Cheikh Anta Diop, Senegal; and University of d'Abomey-Calavi,

	Action	Due by	Responsible
	(b) Federal University of Agriculture, Abeokuta, Nigeria and University of Lome, Togo need to upgrade their computerized accounting system to be satisfactory to prepare project accounts. (c) Ahmadu Bello University, Zaria, Nigeria, Redeemers University and University of Benin which are both in Nigeria do not have accounting information systems but implementation is underway and needs to be monitored and completed. (d) University of Port Harcourt, Nigeria needs to strengthen the capacity of the team managing the accounting information system (Peachtree) as their capacity is low.		Benin. (b) Federal University of Agriculture, Abeokuta, Nigeria and University of Lome, Togo. (c) Ahmadu Bello University, Zaria, Nigeria; Redeemers University; and University of Benin all in Nigeria. (d) University of Port Harcourt, Nigeria.
9	Strengthen governance and anti-corruption systems: This will need to be done by putting in place a functional and independent complaint handling mechanism; setting up a functional risk management and anti-corruption committee; and publishing budgets, financial reports and audited accounts on their websites to promote transparency and accountability.	During Implementation	All implementing entities (University of Benin and Federal University of Agriculture, Abeokuta, both in Nigeria already have anti-corruption committees).
10	Strengthen internal audit skills: Internal audit units are encouraged to strengthen their systems by improving their internal audit manuals with good practices issued by the Institute of Internal Auditors; acquiring internal audit software to be more efficient and effective when conducting audits; train in performance auditing to strengthening value for money auditing; and train in risk based auditing to strengthen internal audit skills.	During Implementation	All implementing entities
11	Strengthening internal control system (a) Strengthen Internal Control Systems related to preparing timely bank reconciliations, updating/coding fixed assets and providing explanations for variances between actual and budgeted expenditure. (b) Address internal audit issues in a timely manner.	During Implementation	(a) Ahmadu Bello University and African University of Science and Technology both in Nigeria. (b) Jos University, Nigeria.
12	Annual financial audit report.	Annually (standard covenant)	All implementing entities

Financial Management DLIs

72. The DLIs below (included in Annex 1) relate to component one and are incentives to strengthen Financial Management. They include:

- ACEs submitting timely withdrawal applications supported by financial reports showing how funds have been utilized.
- Universities under the university council having functioning audit committee that will amongst other assignments follow up audit issues related to the ACE.
- Universities having functioning internal audit units that will support the ACEs.

- ACEs publishing work plans, budgets, interim financial reports and audited accounts on their websites to promote transparency and accountability.

Financial Covenants

73. Financial covenants are the standard ones as stated in the Financing Agreement Schedule 2, Section II (B) on Financial Management, Financial Reports and Audits and Section 4.09 of the General Conditions.

Financial Management conclusion

74. The conclusion of the assessment is that the financial management arrangements in place meet the IDA's minimum requirements under OP/BP10.02, and therefore are adequate to provide, with reasonable assurance, accurate and timely information on the status of the project required by IDA. The overall Financial Management residual risk rating of the Project is Substantial for component one and moderate for component two.

Procurement

Procurement Procedures and Processes under Component 1: Under Component 1, a procurement manual for each ACE will be annexed to the ACE's Implementation Plan and approved by the Bank as an effectiveness condition. This manual will describe the applicable procurement procedures to be used by the ACEs, including relevant WB and national procurement systems. In addition procurement activities will be detailed in approved annual work plans year including budget plans, and procurement plans for each ACE.

75. Furthermore, there are two performance DLI indicators for procurement activities set at a maximum proportion of 5 percent of the ACE financing. In the majority of ACEs, this will amount to a maximum US\$400,000 equivalent based on a total grant amount of US\$8.0 million. Two procurement DLI performance criteria are set out in in this PAD in Annex 1, Table 2: (a) Third-party procurement process verification (audit); and (b) Timeliness of procurement progress (25% of all procurement contracts signed by year 1; 55% by year 2, and 100% by year 3, and verification of installation by year 4).

76. The procurement manual, acceptable to IDA, will limit the thresholds for procurement of goods to a maximum of \$0.3 – 5.0 million (depending upon relevant country threshold for national competitive bidding (NCB) used for IDA financing), and for works to a similar threshold equivalent to the relevant NCB for works under IDA financing (maximum of US\$3 million – US\$20 million). The maximum cumulative value for procurement of civil works under the project is limited to 25 percent of the ACE grant and under all instances a maximum of US\$2 million due to a prioritization of inputs into improving quality of education. The IP will detail the eligible operating and training expenses. The IP will also include the need for each ACE to have a third party procurement verification report, usually on an annual basis. This could be combined with the annual financial audit report.

77. **Procurement Procedures and Processes under Component 2:** For Component 2 implemented by the RFU hosted within the AAU, by National Universities Commission, Nigeria and by the project unit in the Ministry of Basic and Secondary Education in The Gambia, annual work plans including budget plans, and procurement plans will be reviewed and approved by IDA. The procurement processes will be carried out in accordance with the World Bank's (i)

"Guidelines: Procurement of Goods, Works and Non-consulting Services under IBRD Loans and IDA Credits and Grants by World Bank Borrowers", dated January 2011; and (ii) "Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits and Grants by World Bank Borrowers", dated January 2011. Procurement threshold for Component 2 will follow the standard procurement threshold for the countries (Ghana for AAU, Nigeria and The Gambia) and the type of procurement (consulting services and goods). These will be described in the Project Regional Operations Manual.

78. **Both Components 1 and 2** will be carried out following the World Bank "Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants, dated October 15, 2006 and revised in January 2011.

79. In addition the following specific provisions stipulated in the Legal Agreement will apply as follows:

- All Components: The ACE Project Regional Operations Manual to be acceptable to IDA shall be endorsed prepared for each ACE, the AAU, the National Universities Commission, Nigeria and the project unit in the Ministry of Basic and Secondary Education in The Gambia. Annual implementation plans, include Financial Management Manual, and Procurement Manual that include procurement plans will be cleared prior to effectiveness.
- Sub-Component 2.1, 2.2 and 2.3: Works will not be an acceptable procurement category or an eligible expense
- Component 2.3: The Consultant services will be selected only from among the other selected ACEs. This is justified by the competitive selection process for ACEs that has already identified a high quality pool of service providers in the sub-region sufficient to meet the needs for this sub-component.
- Component 2- Operating Costs: The operating costs include staff, travel expenditures and other travel-related allowances; vehicles rental; vehicle fueling; utilities and communication expenses; and bank charges. Operating costs will be managed using the implementing agency's administrative procedures which will be acceptable to the Bank, as described in the annual implementation work plans.

80. **Procurement Implementation Arrangements:** Under Component 1, each ACE implementing agency has procurement administrative units as appropriate under national legal frameworks, which a head of unit and procurement officers. Generally these procurement implementation arrangements are appropriate to implement the relevant national procurement procedures for Component 1. Under Component 2, the RFU at AAU, the National Universities Commission, Nigeria, and The Gambia project unit (PCU) have structures as appropriate for implementation of Bank procurement procedures. Although the structures are in place for both project components, there are still risks and mitigation measures to be implemented as indicated in the section below.

81. For both components, the procurement plans for the entire project duration was reviewed at Negotiations. Procurement plans will be available in the project's database and on the Bank's external website.

82. **Procurement Risks:** The procurement risks vary from moderate to substantial before mitigation measures are implemented, and the description of risks and mitigation measures are detailed in the table below. With implementation of the agreed mitigation measures, the risks are reduced to “Low” to “Moderate”.

Procurement Risks and Mitigation Measures by Country and ACE

Country	Implementing Agency	Procurement Capacity Evaluation	Risk Rating Before Mitigation Measures	Procurement Mitigation Measures	Risk Rating After Mitigation Measures
Component 1					
Senegal UCAD					
		<p>Procurement activities will be carried out by The Secretariat General of UCAD throughout the Project implementation Unit (PIU) Tertiary education and Financing for results.</p> <p>Each of these implementation Agencies has, based on the national procurement reform effective since January 2008, a CM (Commission des Marchés), which is in charge of bids/proposals opening and contracts award; and a CPM (Cellule de Passation des Marchés) in charge of quality control and procurement plans. In addition, they all have experience in handling procurement activities using national procedures and standard bidding documents.</p> <p>An assessment of the capacity of the Implementing Agencies to implement procurement actions for the Project has been carried out by the Bank's procurement specialist from December 20, 2013 to January 7, 2014. The assessment reviewed organizational structures for implementing the Project and the interaction between the Project's staff responsible for procurement and the executing agencies.</p>	Substantial	The mitigation measures recommended are (a) Prepare an implementation procedures manual for Administrative, Procurement, Accounting, and Financial procedures, (b) appoint additional staff to ensure adequate filing of all procurement documentation ; (c) recruit an experienced Procurement Specialist on a part-time basis to support and train the permanent staff at the CN, CPM and Faculty of Medicine in hands-on training, and seminars for all other staff in procurement procedures.	Moderate
Burkina Faso: International Institute for water and environmental Engineering (2iE)					
		A procurement capacity assessment of the International Institute for water and environmental Engineering (2iE) has been conducted on December 9, 2013. The procurements institutional arrangement and committees required by the Manual of procedures are formally established under the Presidency of the “Direction du contrôle financier et du budget” with staff having relative procurement experience. The procurement committee (Commission des Marchés) is regularly installed and operational. The potential risks identified are the insufficient experience of staff in charge of procurement, the procurement functions diluted in other responsibilities, the absence of a formal administrative complaint mechanism and the ongoing	Moderate	The mitigation measures agreed upon are to: (a) recruit a Procurement Officer; (b) Organize a training on the revised manual of procedures for staffs which will be involved in the project procurement process; (c) revise of the Manual of procedures to set up inter alias a formal complaint	Low

<p>reorganization further to the resignation of the manager of the agency.</p> <p>Taking into consideration the findings of procurement assessment, especially the quality of procurement document, the existing of CPMP, CCMP and the external control exerted on high value contracts by the Ministry of Finance through the national procurement review board (Direction National du Contrôle des Marchés Publics (DNCMP)), the overall project procurement risk has been rated Moderate.</p>		<p>mechanism with clear procedures; (d) increase the procurement thresholds; (e) and update the bidding documents.</p>	
Benin Université de Calavi-Abomey			
<p>Procurement accountability and decision making is not consistently clear. Staff has difficulty in applying procurement processes due to insufficient guidance, knowledge and experience, which is illustrated by insufficient quality of procurement plans and implementation thereof, so as to ensure that goods are delivered in time, within cost and at the required quality.</p> <p>The specific risks include:</p> <ul style="list-style-type: none"> - Lack of clarity on who is accountable for which procurement decisions - Inability of agency staff to apply procurement processes correctly and consistently - Lack of experience and procurement knowledge at a senior level - combining the functions of procurement and accountant - Delays to project processing and implementation due to lack of proper planning - Technical specifications/TORs are vague or too restrictive resulting in only a few bidders/firms - Standard documents for shopping need to be upgraded (e.g. Invitation letter and evaluation report). 	Substanti al	<p>The mitigation measures are: (a) clarify who is accountable for procurement decisions; (b) train staff on consistent procurement processes (c) provide intensive training to the current person in charge of procurement, and supplement hiring a part-time procurement advisor (d) clearly divide the functions procurement and accounting (e) prepare procurement plans (f) engage experts to training and improve the quality of technical specifications and TORs (f) update the national bidding documents and shopping documents</p>	Moderate
Cameroon: University of Yaoundé I			
<p>The procurement capacity evaluation carried out in January 2014 shows that the university has a strong procurement unit staffed by 6 experienced procurement specialists. The administrative framework and procedures are satisfactory.</p> <p>Project management of contracts is satisfactory as is filing of all documentation.</p>	Moderate	<p>Designate a professional in charge of procurement at the project support unit. Recruit a consultant to prepare the explicit written procurement procedures and implementation steps.</p>	Low
Togo: University of Lome – Presidency			
<p>A procurement capacity assessment of the University of Lome was carried out on November 15, 2013. The procurement institutional arrangement and committees required by the national procurement code are formally established under the Presidency of the University of Lome with staff having relatively good procurement experience.. The University procurement Committee and the internal procurement review Committee (respectively Commission de Passation de Marchés Publics (CPMP) and Commission de Contrôle des Marchés Publics (CCMP)) are operational. The main potential risks are the lack of experience with the volume of procurement anticipated under this project and the lack of a procurement manual within the University.</p> <p>Taking into consideration the findings of procurement assessment, especially the quality of procurement standard documents, the existing</p>	Moderate	<p>The mitigation measures are to: (a) recruit a Procurement Officer; (b) organize procurement training for the staff to be involved in the project procurement process; (c) nominate a Procurement Officer deputy within the university (normally a university/civil servant), and (d) prepare procurement manual.</p>	Low

of CPMP, CCMP and the external control exerted on high value contracts by the Ministry of Finance through the national procurement review board (Direction National du Contrôle des Marchés Publics (DNCMP)), the overall project procurement risk has been rated Moderate.			
Ghana: Kwame Nkrumah University of Science & Technology			
All procurement at KNUST is handled by the KNUST Procurement Department, which will apply to the ACE. KNUST is a government institution of tertiary education, established in 1952. Being a government agency, it uses the national procurement system under the Ghana Public Procurement Act. There is adequate staffing and knowledge. The key risks for procurement are: (i) possible delays in processing procurement and payments; (ii) realistic procurement plans covering the entire project not in place; (iii) moderately satisfactory records keeping and procurement/contract filing.	Moderate	The mitigation measures are: (a) set standard processing times for procurement packages (b) prepare a procurement plan for the entire project duration to ensure readiness and avoid delays; (c) prepare promptly first set of bid documents, terms of references and requests for proposals; (d) maintain files and records in line with the procurement cycle with close monitoring by Procurement staff .	Low
Ghana: University of Ghana;			
The procurement activities under the project in the two Centers at the University of Ghana (UG) will be carried out by the Procurement Unit of UG. As UG is a government public institution agency, it is subject to the Ghana Public Procurement Act. The procurement staff has good procurement knowledge and experience. The key procurement risks are: (i) possible delays in processing procurement and payment (ii) lack of realistic procurement plans covering the entire project	Moderate	The mitigation measures are: (a) set standard processing times for procurements; (b) prepare a procurement plan for the entire project duration to ensure readiness and avoid delays; (c) prepare promptly the first set of bid documents, terms of references and requests for proposals.	Low
Nigeria (summarized for all 10 participating universities)			
A federal Public Procurement Act was promulgated in Nigeria in June 2007. The ten (10) selected ACEs except the Redeemers University and the African University of Science and Technology are federal establishments and are legally covered by the provisions Nigeria Public Procurement Act 2007. All the ten selected ACEs with the exception of the Redeemers University have in the past implemented World Bank Assisted competitive grants under the World Bank Assisted STEB-B project, which closed in June 2013. The Redeemers University will be technically supported to bring the institution up the level of others. The ACEs will benefit from the STEP-B experience and personnel in the implementation of the ACE grants. The essential elements of the procurement framework at the federal universities are in line with internationally acceptable procurement standards. The Federal National Bidding Document has been cleared by the Bank for use by Bank funded project implementation units. The Procurement Act also provides for complaints and appeals mechanism to enhance accountability	Moderate	The mitigation measures are: (a) Maintain current level of experienced procurement staff. Monitor on a continuous basis regularly during implementation. (b) Hands on training for procurement staff during implementation. (c) Procurement audits. (d) Procurement strengthening to be provided Nigeria Universities Commission.	Low

<u>Component 2</u>			
<i>Component 2.1: Regional Capacity, Evaluation and Facilitation: Association of African Universities (AAU)</i>			
AAU has previously received Bank Funds through ACBF for the period 2006 – 2010. AAU is an international non-governmental organization. There is a Procurement focal person assigned to carry out procurement at AAU. There is a tender committee with approval function. Indications are that some of the members of the tender committee do the actual procurement, and potential conflicts of interests are to be avoided. Records keeping is satisfactory with the agency encouraged to keep the files complete at all times.	Moderate	The mitigation measures are: (a) Procurement capacity will be further enhanced through procurement building. (b) Although AAU lacks standard procurement bidding documents (SBDs), it will use Bank SBDs, as this sub-component follows Bank procurement procedures. (c) It is recommended there should be a clear avoidance conflict of interests for members of the tender evaluation committees, and those who prepare tender packages.	Low
<i>Component 2.3 The Gambia</i>			
The procurement activities for the project will be conducted using the existing institutional arrangements under the PCU for the implementation of the ongoing education sector projects (IDA III-Phase2 EFA/FTI, ECD). The PCU is fully integrated into the MOBSE and the team is well versed in IDA procedures, and has handled procurement under previous and on-going IDA programs as well as all other donor operations where an executing agency is not in place (including AfDB, BADEA, IDB, among others). The PCU has been functioning satisfactory in previously financed WB projects. With this background experience, it is expected that the sum of expertise gained in the education sector projects will highly benefit to the arrangement of the new project, and will help mitigating the residual risks that may exist. In addition, PCU MOBSE comprises a qualified team including: (i) a Program Coordinator who coordinates all externally financed programs as well as (ii) a financial controller and two accountants, (iii) a Construction Unit comprising three engineers and six construction monitors, and (iv) a Procurement Unit. The strengthening of the contract committee within PCU with the designation of an Education Specialist to coordinate the Procurement unit, and the recruitment of a qualified procurement specialist and procurement assistant has been recently agreed in December 2013.	Substantial	The mitigation measures are: (i) maintain in place the recently recruited qualified procurement specialist and procurement assistant (ii) maintain the recruited legal officer to assist contracting and contract management at PCU level and (iii) target capacity building on contract management for all PCU staff especially the engineers and construction supervision staff.	Moderate

83. Funding for four of the 19 Africa Centers of Excellence became available subsequent to project appraisal. These centers include one center in Senegal and three centers in Nigeria as well as the Nigeria Universities Commission. These additional centers will undergo the same fiduciary and safeguard assessments as the 15 Centers of Excellence, and design adequate mitigation measures prior to project effectiveness.

Environmental and Social (including safeguards)

Social (including Safeguards)

84. Project activities focus on quality improvements and not on expanding capacity to more students. All civil works will take place on existing campus grounds, i.e. within existing physical footprint, and therefore do not require any land taking nor will they cause involuntary resettlement, loss of assets and/or restriction of access to resources or livelihoods. The project will be implemented within the existing university campuses and will not involve excavations or other earthworks and is not likely to be located in, or in the vicinity of recognized cultural heritage sites. Therefore, no social safeguards are triggered.

Environment (including Safeguards)

85. There will be rehabilitation of some academic/research institutions and minor construction in few of the campuses, and these are expected to be of small scale, therefore the environmental and social impacts are not expected to be significant. As an alternative to full ESMPs, an Environmental Management Plan checklist (EMP checklist) was prepared for each one of the chosen institutions to manage environmental and social impacts. The impacts and mitigation measures stated in these ESMP checklist will have to be closely monitored and evaluated and the project must ensure to include an environmental section in their reporting system to report the impacts and the mitigation measures which should be in conformity with part B (general construction/rehabilitation activities), F (toxic materials), H (disposal of medical waste) of the checklist. As the project will include rehabilitation and minor construction within existing university/institution campus grounds, natural habitats will not be affected by project activities. Date of disclosure of the ESMP both in country and at infoshop is January 29, 2014.

Other Safeguards Policies Triggered

86. Other Safeguard policies including those on pest management, natural habitat, physical cultural resources, indigenous people and involuntary resettlement are not triggered.

Monitoring & Evaluation

87. The program design has a strong focus on M&E which is critical to ensuring the success of the disbursement linked indicators model. The countries and selected institutions are committed to using a standard framework for monitoring performance of the project as described in Annex 3. Two sets of cascading Results Frameworks (RF) templates were established: (i) a standard RF template for each selected ACE (currently 15) to measure progress; as well as (ii) an overall, aggregated RF which aggregates all the data provided by the ACEs, and in addition, also features a set of additional indicators measuring the AAU's performance as a facilitation unit. Both together measure progress of the program as a whole.

88. The Monitoring and Evaluation will primarily be undertaken by each of the selected ACEs through their data sources, tracking tools and databases which will be established and/or tailored specifically to the project. Each ACE is expected to have an established monitoring and evaluation system where the ACE is responsible for collecting data on the indicators agreed upon. Where required, a consultant may be employed through the AAU, in coordination with the

WB, to review these systems and tracking mechanisms and advise the ACEs in establishing and improving them. The initial consultancy will be in place at the start of the program to ensure the required systems are established and in place when the implementation phase begins. In the course of project implementation, these systems will be reviewed and their adequacy assessed bi-annually no later than 4-6 weeks before the next reporting cycle.

89. The additional review mechanisms of the ACEs' RFs and their tracking tools and data will include the following: (a) institutional progress reports and internal quality and efficiency audit reports; (b) third party verification through external reviewers from the AAU (partly though a consultant or consultancy firm, who will also have the responsibility to support the ACEs in fine-tuning their M&E systems and tracking mechanisms, specifically in the first year of implementation), and performance audit reports; (c) external verification by an independent third party (probably a consultancy firm, or an independent consultancy group) which will also have the responsibility to verify achievement of results/ targets, some of which are vital as they relate to the DLIs; (d) external verification of research publication and accreditations undertaken by an internationally recognized bibliometric data basis; and (e) interactions with stakeholders.

90. Regional-level responsibility for aggregating the data and results frameworks of the participating ACEs will be located at the Regional Facilitation Unit (hosted within the Association of African Universities). The AAU will also have the responsibility to report on a set of additional indicators which form part of this overall aggregated RF, and which will not only facilitate the AAU to plan and manage their activities based upon results, but also enable the program to track the performance of the AAU as the overarching facilitation unit.

91. Within its proposal, the selected ACE is expected to indicate their Monitoring and Evaluation capacity, and to establish their Monitoring and Evaluation focal point, a person that will be responsible for submitting the indicators for the selected ACE (to ensure the ACE project team assumes responsibility and enables their M&E focal point to compile the data. Within each ACE's RF, each ACE will for each indicator designate one person who will be directly responsible for establishing this indicator's specific sources and tracking tools and collecting the respective data for that specific indicator. (Generally, this will be the person designated as "component leader" for activities feeding into this indicator as included in the RF submitted to the AAU and the WB).

92. If the required M&E capacity is not fully in place at the time of the signing of the performance agreement, it is expected that a plan detailing the process of enhancing M&E capacity is included in the revised proposal. Adequate capacity building will need to be provided to the ACEs' M&E staff by the ACEs. Furthermore, some additional training may take place at the regional level organized through the AAU in close cooperation with the WB, to address any ACE specific overarching challenges if they arise.

93. In order for the AAU to fulfill its oversight role as well as its role in establishing and tracking the overall M&E Level, capacity building will need to be provided to the AAU. Capacity Building has already been undertaken during the preparation phase leading up to the signing of the agreements, but would need to be continued. Capacity Building activities may include direct advice from the WB person responsible for guiding the M&E program activities, as well as specific training courses. During the preparation phase, some initial training has already been organized (e.g. training on the theory of change, undertaken and/ or financed by

Wageningen University in cooperation with Nuffic as their direct contribution to the ACE-Program), and additional training is envisaged to take place through this and other sources.

94. Support for improving the availability, reliability, and timeliness of routine institutional data is an important part of the project given that disbursements will be linked to performance and the realization of agreed indicators. Capacity building to facilitate the task of data collection and monitoring will be provided through the Regional Facilitation Unit (AAU). In addition, a budget for the review of submitted results data will be provided under the project.

95. Implementation of the M&E frameworks will be tracked during Project implementation, and will be central to project supervision. The third party verifications outlined will be undertaken biannually (prior to, or during project supervision missions, serving as the key information source for disbursements to be processed. The mid-term program review may offer the opportunity to amend the indicator series, or target values based on evolving circumstances.

Annex 4 Operational Risk Assessment Framework (ORAF)

Africa Higher Education Centers of Excellence Project (P126974)

Risks

1. Project Stakeholder Risks

1.1 Stakeholder Risk	Rating	Moderate				
<p>Risk Description:</p> <p>Delayed effectiveness due to parliamentary approval. A number of countries are required to seek the approval of the parliament for the project</p> <p>The selected centers of excellence (ACEs) focus less on regional activities and partnerships and instead focus on inward looking activities.</p> <p>There may be insufficient understanding and acceptance of the “ non-traditional “results-based financing "Disbursement Linked Indicator (DLI) " approach by key stakeholders such as Ministry of Finance who are key in ensuring successful implementation of the DLI approach</p>	Risk Management:					
	<p>The project team works with each government to present the project in a timely manner to the parliament. There is no cross-effectiveness condition in the project. Hence the potential delay of approval in one country will not affect others.</p>					
	Resp: Borrower and Bank	Status: In Progress	Stage: Effectiveness	Recurrent: No <input checked="" type="checkbox"/>	Due Date:	Frequency: na
	Risk Management:					
	<p>The ACE leadership, faculty and researchers have been extensively consulted on the concept of regional centers of excellence and there has been broad support of such an approach given increasing regionality of higher education institutions in Africa. Each center must spend at least 10% of the financing on regional partnerships. This parameter has been well received with some centers expressing importance of engaging more with regional partners.</p>					
	Resp: Both	Status: In Progress	Stage: Both	Recurrent: <input checked="" type="checkbox"/>	Due Date:	Frequency:
	Risk Management:					

	The project has engaged closely with Consultation with Ministries of Finance and selected centers on the DLI approach with a good understanding of the DLI mechanism reached					
	Resp:	Status:	Stage:	Recurrent: <input checked="" type="checkbox"/>	Due Date:	Frequency :
2. Implementing Agency (IA) Risks (including Fiduciary Risks)						
2.1 Capacity	Rating	Substantial				
<p>Risk Description:</p> <p>Insufficient Organizational capacity to adequately manage the implementation of the project may be a problem. In addition, there may be insufficient fiduciary management capacity in terms of procurement, finance, reporting and auditing of aspiring ACE's.</p> <p>The ACE may not have sufficient technical knowledge and operational capacity to lead and manage the Performance based compensation aspects of the project, which includes the management of multiple contracts (e.g., with purchaser), and counter verification of data. This may increase the risk of misreporting, unfair assessment and delayed payment.</p>	Risk Management: <p>The selection process of the ACEs took into account the needed organizational, physical and fiduciary capacity required to implement the project. ACEs moreover will receive support in implementation from the Bank and various other actors involved in the implementation of the project (including the ACE Steering committee and Regional Facilitation Unit). Funding under the project itself, as well as linking the project to existing in-country implementation structures as best as possible moreover, will ensure the strengthening of organizational, physical, fiduciary and M&E capacity needed to implement the Project.</p>					
	Resp: Both	Status: In Progress	Stage: Both	Recurrent: <input checked="" type="checkbox"/>	Due Date:	Frequency :
	Risk Management: <p>Technical assistance (TA) will be provided by the Bank team and AAU consultants on the performance based financing aspect of the project, and clearly defined roles and responsibilities will be provided. Intensive capacity building will be provided in management, quantity verification, and coaching to the ACEs. Further, training and hands-on coaching on performance based financing methods will be provided during implementation.</p>					
	Resp: Bank and AAU	Status: In Progress	Stage: Implementation	Recurrent: <input checked="" type="checkbox"/>	Due Date:	Frequency :
2.2 Governance	Rating	Moderate				

Risk Description: Institutional leaders, bodies and units in the aspiring ACEs, Partner institutions and networks, which are responsible for achieving sectoral objectives, fail to maintain proper oversight, over agreed upon program performance requirements and priorities. Furthermore, engagement by the institutional bodies to customize to the program quality needs is not sustained. Finally, there may be a lack of transparency between the ACE vis a vis partner institutions.	Risk Management: Institutional policies and procedures will be initially reviewed and subsequently assessed as to how routine and administrative tasks are undertaken. Annual joint reviews by the government through National Review Committee's and the Bank will identify where key improvements are necessary. The project has also instituted a mechanism where if at the mid-term review the selected ACE is not implementing in a timely manner, the allocated financing will be decreased. As such this will motivate the leadership to work together.					
	Resp: Both	Status: In Progress	Stage: Implementation	Recurrent:	Due Date: June 2016	Frequency:
3. Project Risks						
3.1 Design	Rating	Moderate				
Risk Description: The project is complex with the number of stakeholders: eight countries, four sectors, focus on partnerships, and new ways of coordination. The competitive selection of the institutions is another challenge. Component 2.3 which focuses on demand driven regional education services for non-ACE hosting countries may complicate the project further. Despite consultations with interested countries on this component (small and post-conflict countries), more discussions are needed to clarify further	Risk Management: The project has been simplified since concept stage with only 2 components now. Capacity building will be provided to the AAU team to undertake its functions. In addition Bank experience with tertiary education in the three sectors and regular contacts with sectoral leaders at multiple levels, coupled with Bank experience with a variety of regional operations in the Africa Region and elsewhere, will be incorporated into the design. Bank commitment in principle to a this multi-year operation will generate support both in the Africa region and among donors Institutional leaders will maintain quality focus with ACE steering committee providing oversight. Intensive Bank supervision in the early phases will be required					
	Resp: Both	Status: Completed	Stage: Both	Recurrent:	Due Date:	Frequency:
	Risk Management:					

which proposed model of operation will suit the countries. The disbursement of the project will be linked to the achievements of clearly defined indicators related to building capacity in the ACE and to supporting partnerships with national and out of country institutions. During implementation however, financing triggers may not be adequately understood.	Component 2.3 will be limited to 1 countries maximum for now. The project team has developed a model in which this component can be done, with procurement arrangements clarified.					
	Resp:	Status: Completed	Stage:	Recurrent:	Due Date:	Frequency:
	Risk Management: Significant support will be provided by the Bank and AAU to ensure that financing triggers are clearly understood by all involved. AAU will contract a third party M&E consultancy to improve data collection and ensure all required information is collected to prove the attainment of the results.					
	Resp: Bank	Status:	Stage: implementation	Recurrent:	Due Date: July 2014	Frequency:
3.2 Social and Environmental	Rating	Moderate				
Risk Description: Environmental risks may occur for example from construction and rehabilitation activities.	Risk Management: The implementing partners of the project will maintain attention to social and environmental developments that could jeopardize the quality, objectivity, and regional nature of the Program. An environmental and social management plan has been developed to assess any risks and propose relevant mitigation measures.					
	Resp: Client	Status: In Progress	Stage: Implementation	Recurrent: <input checked="" type="checkbox"/>	Due Date:	Frequency:
3.3 Program and Donor	Rating	Moderate				
Risk Description: Donors and technical assistance agencies that have expressed interest, in principle, are not forthcoming with support. There	Risk Management: While not dependent on other donors or technical assistance entities in either the concept or approval phase, others will nevertheless be seen as important for success of the project. During program preparation a consultative process will be undertaken with a significant number of bilateral and multi-lateral donors, foundations, technical assistance entities, professional associations, and networks, which					

may be competing/supply driven donor priorities, and/or technical partners provide uncoordinated and duplicated technical assistance.	have already shown interest, to determine and plan for either joint or parallel funding, and technical support.					
	Resp: Both	Status: Completed	Stage: Both	Recurrent:	Due Date: 30-Nov-2012	Frequency :
	Risk Management: Each ACE proposal was reviewed meticulously by independent evaluators, the bank and relevant partners. An assessment has been carried out in all institutions shortlisted to receive support, to ensure that facts listed in the proposal are either corroborated or negated					
Commitment, existing capacity, and program strategies presented by the ACE's in their proposals may not be realistic and not as they say. Funding could thus be supporting an ACE candidate that is suitable on paper, but not in practice.	Resp:	Status:	Stage:	Recurrent:	Due Date:	Frequency :
3.4 Delivery Monitoring and Sustainability	Rating	Substantial				
	Risk Management: The ACE Steering Committee, governments, external donor and technical assistance partners, will play a role in guiding and providing partnerships to help the ACEs work towards sustainability.					
Risk Description: Sustainability for aspiring ACEs and partner institutions will depend on: continuing leadership commitment to quality;adequate resource flows from tuition, research grants, public sector financing, and external donors; maintenance of status as a regional Center of Excellence by the international and regional communities; and in attracting and keeping talent in the selected sectors Insufficient development of mechanisms to measure results, and insufficient capacity to monitor and report on results may	Resp: Both	Status: In Progress	Stage: Implementation	Recurrent: <input checked="" type="checkbox"/>	Due Date:	Frequency :
	Risk Management: While basic metrics have been identified for tracking key indicators, during program development extensive attention will be paid to monitoring, in terms of relevant metrics, data collection, and program delivery. The Bank will also work closely with the Regional Facilitation Unit in building M&E capacity in both the RFU and selected ACEs. An independent third party M&E facility will also be hired to ensure reported DLIs are well recorded.					
	Resp:	Status:	Stage: Implementation	Recurrent: <input checked="" type="checkbox"/>	Due Date:	Frequency :

jeopardize proposed program goals.	Risk Management: The Bank together with the relevant stakeholders of the project will develop and follow a strategy that will result in self sufficiency for the ACE after the WB support ends. This can be done by increasing reliance on income generating activities by the ACE themselves. In addition, the team will involve partner organizations and the private sector, to promote and help generate financing opportunities.					
Strategy for longer term financing not adequately designed or implemented. At the end of the project, the ACEs may no longer have the funding to sustain themselves. There may be inadequate resource flows from tuition, research grants, public sector financing, and external donors even before the program ends (early depletion of resources).	Resp:	Status:	Stage: Imple menta tion	Recurrent: <input checked="" type="checkbox"/>	Due Date:	Frequency :
3.5 Other (Optional)	Rating	Moderate				
Risk Description: Aspiring ACEs will want to pursue purely academic improvements rather than those linked to development priorities.	Risk Management: Academic quality will be the goal but, external stakeholders and industry and sector partnerships will help aspiring ACEs anchor their growth in response to development priorities.					
	Resp: Client	Status: In Progres s	Stage: Imple menta tion	Recurrent: <input checked="" type="checkbox"/>	Due Date:	Frequency :
Overall Risk						
Overall Implementation Risk: Substantial						
Risk Description: Notwithstanding the envisaged risk mitigation measures, the project includes a new approach for Africa, with the regional and partnership conditions linked to this project presenting a particular challenge to implementing entities. In addition, the results-based disbursements represent a new approach for many countries and universities (traditionally used to cost-based financing). Inadequate procurement, project management and technical capacity could pose a risk to adequate performance and hoped-for achievement of results. In addition to establishing and developing their institutions to serve as centers of excellence, the selected ACEs must also work towards capacity building for partner institutions in non-selected countries (under component 2.3). This could potentially over-burden the ACEs; hence it is vital that the proposals of the selected centers of excellence undergo proposal improvement to ensure the proposals match the project objectives and timelines.						

Annex 5: Implementation Support Plan

Africa Higher Education Centers of Excellence Project

Strategy and Approach for Implementation Support

1. The strategy for implementation support has been developed based on the nature of the project and its risk profile. It aims to make implementation support to the ACEs, governments and AAU flexible and efficient, and focuses on identified success factors and on implementation of the risk mitigation measures defined in the ORAF.
2. The success factors for strong implementation support are believed to be the following:
 - Open and regular communication with all actors involved in the Project, notably the selected centers of excellence (ACEs), the ACE National Review Committee, the ACE Steering Committee and Regional Facilitation Unit.
 - Fostering a culture of trust between the stakeholders and a problem-solving attitude.
 - Up-front emphasis on making the mechanics of the results-based financing work, including the flow of funds.
 - Up-front prioritization of adequate capacity (people) working on the project. In particular procurement staff.
 - Balancing the regional one-project model of Africa Centers of Excellence with the need for flexibility to accommodate the specificities of each participating country and university.
 - Provide ample opportunities for peer learning between the ACEs and governments. This implies regular meetings of all ACEs and a regular flow of information on good and bad practices.
 - Ensure the designed incentives are maintained. Notably incentives for producing results, timely implementation, and establishing proper institutional self-oversight.
3. The implementation support and supervision strategy is based on several mechanisms that will enable enhanced implementation support to the Government, and timely and effective monitoring. The implementation support and supervision mechanisms thus comprises:
 - (a) Weekly collaboration with the AAU team to strengthen common project implementation support and supervision tools, notably support and generic templates that the universities can use for implementation, monitoring and oversight. This should always be undertaken in collaboration with the ACEs and Steering Committee involvement in important matters. This should in particular support development of ToRs, template/methods for implementation support, include ToRs and coordination with partners for capacity building, and supervision tools, including third-party monitoring for the verification of DLIs, institutional audit committee, procurement reports, etc.
 - (b) Joint Review Missions where all main stakeholders, including the 19 ACEs and Steering Committee members, meet to review and discuss progress based upon ACE data and

reports, AAU aggregated reports, and other supervision material. This is a key opportunity for peer learning and comparison of progress and identification of common challenges. This is expected to take place twice a year. These will include visit to ACEs.

- (c) AAU reporting and capacity building. ACE reporting based on the performance agreements; and (d) internal audit and FM reporting.
- (d) Use of external academic and business advisors and evaluators. To the extent possible and funds permitting, the AAU and the Bank will seek to work with international partners
- (e) Country and ACE specific interventions by the team, most often the country-office based WB staff. This will be necessary when requests from the RFU are not met, procedures in the project-level operational are not followed, or to facilitate important coordination between partners. This could be the case for fiduciary issues for example. Such country interventions will be coordinated with the governmental agency responsible for the project or with the ACE national review committee.
- (f) A Project Mid-Term Review (MTR) is scheduled for June 2016. The objective of the MTR is to review the progress of the project implementation and results. The MTR will also undertake a comprehensive review of the DLI framework for all the ACEs and adjust if needed the DLIs and implementation arrangements for the project.

Implementation Support Plan

- 4. The Bank will provide strong implementation support to the ACEs as well as the relevant agencies regarding technical, fiduciary, social, and environmental issues.

Technical inputs

- 5. **Fiduciary Training** will be provided by the Bank's financial management specialist and the procurement specialist will be provide at the project launch workshop (May 2014) before Project effectiveness and during Project implementation. This will allow building capacity among the ACE and RFU teams in matters of FM and Procurement, particularly regarding Bank procedures. Supervision of financial management arrangements will be carried out as required as part of the Project supervision plan.

- 6. **Implementation support for procurement**. Bank Procurement Specialists will participate regularly in implementation support to assist in monitoring of procurement procedures and procurement plans with ACE entities and the regional RFU. Formal supervision visits conducted at least once in a year to support implementing agencies and to ensure that procurement functions do not become an obstacle to the achievement of the PDO. Post procurement reviews will be conducted based on the risk ratings for Component 2 and the volumes of post review contracts actually carried out by the implementing agencies.

- 7. **Implementation support plan for Financial Management**. FM on-site supervision will be conducted twice a year for component one and once a year for component two based on the risk rating of the project. Other forms of supervision will include desks reviews of IFRs and audit reports.

8. **Safeguards.** The Bank's safeguard specialist's supervision will, on the environmental side, focus on ensuring the compliance to the ESMP with respect to activities executed by the selected centers of excellence under Component 1, ensuring that they comply with the Bank's safeguards policies on Environmental Assessment (OP/BP 4.01).

9. **Country Relations.** The regional Task Team Leader will coordinate with the Co-TTLs, the Bank Team and the Regional Facilitation Unit to ensure Project implementation is consistent with Bank requirements, as specified in the legal agreements. Moreover, the TTL/Co-TTLs will meet with Government, the National Committees and senior officials of selected centers of excellence on a regular basis to keep them informed of Project progress and issues requiring resolution at their level. Constant channels for information exchange will be maintained with all major actors, taking advantage of trust and communication capacity built during Project preparation.

The main focus of implementation support is summarized below.

Time	Focus	Resource Estimate	Partner Role
First twelve months	Technical Review/Support	TTL 8 Ws Co-TTLs: 3 SWs M&E Specialist 2 SWs	Capacity building
	FM training and supervision	FM specialist 8 SWs	
	Environment and Social monitoring & reporting	Environment Specialist 1 SW	
	Higher Education Specialist	Higher Education 2 SWs	
	Institutional arrangement and project supervision coordination and Team Leadership	TTL 12 SWs	
12-48 months	Technical Review/Support	TTL 4 SWs Co-TTLs 4 SWs M&E Specialist 2 SWs	‘
	Environment and Social monitoring & reporting	Environment Specialist 1 SW Social Development Specialist 1 SWs	
	Civil works support	Infrastructure Specialist 8 Ws	
	Financial management disbursement and reporting	FM 4 SWs	
	Procurement management	Procurement Management 2 SW	
	Institutional arrangement and project supervision coordination and Team Leadership	TTL 12 SWs	

Staff skill mix required is summarized below.

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Operations Officer	8 SWs annually	Fields trips as required.	HQ and Country office based
Education Specialists (co-TTLs)	6 SWs annually	Two	Externally based
M&E Specialist	2 SW annually	Fields trips as required.	Country office based
Procurement	4 SWs annually	Fields trips as required.	Country office based
Social Specialist	1 SWs annually	Fields trips as required.	Country office based
Environment Specialist	1 SW annually	Fields trips as required.	Country office based
Infrastructure Specialist	2 SW annually	Field trips as required	HQ/Regionally based??
FM Specialist	6 SWs annually	Fields trips as required.	Country office based
Task Team Leader	12 SWs first year, then 12 SWs annually in the following years	Field trips as required	HQ Based

Annex 6: Economic and Financial Analysis

Africa Higher Education Centers of Excellence Project

1. **The economic and financial analysis for the Centers of Excellence project presents the rationale for government investment in higher education**, which includes the positive externalities of higher education graduates in the areas of agriculture, engineering, mathematics, science, and health; as well as market failures that prevent investment in higher education. The empirical results on the returns to higher education indicate that acquisition of higher education degrees is associated with higher earnings (returns are 2.4 percent for Burkina-Faso, 30 percent for Cameroon, 30 percent for Ghana, and 15 percent for Nigeria). The benefit-cost analysis of the main project component, Strengthening capacity of selected universities, show that the IRR is 3 percent in Burkina-Faso, 30 percent in Cameroon, 28 percent in Ghana, and 15 percent in Nigeria. The cost of an ACE will represent a small portion of the public expenditure on higher education; in a given year of the project, ACE expenditures will represent approximately 5.2 percent of Benin public expenditure in higher education, 2.9 percent of Burkina-Faso, 2.0 percent of Cameroon, and 0.4 percent of Ghana).

Rationale for Investment in Centers of Excellence

2. **Education is an investment that increases individual's skills and makes more informed and socialized citizens.** Higher number of years of education is also correlated with democratic governments across countries. At the individual level, skills make individuals more productive and employable, extending their labor market participation over lifetime, leading to higher earnings, and better quality of life. At a country level, education is associated with economic growth. In addition, education programs that address skills shortages in fields such as sustainable development (engineers that can deal with rising needs in energy, environment, climate change, and infrastructure sectors), service sectors (like doctors) and extractive industries, are lacking in the Africa region. This is critical as meeting these skills shortages would help individuals get better jobs and countries unleash their growth potential by taking advantage of technology to catch-up.

Table 1. Enrollment rates in higher education across the world regions

	2000	2010
Arab States	19.4	23.7
Central and Eastern Europe	43.1	65.7
East Asia and the Pacific	15.8	29.0
Latin America and the Caribbean	22.8	40.6
North America and Western Europe	59.9	75.6
South and West Asia	8.6	16.7
Sub-Saharan Africa	4.3	6.8

Source: UNESCO UIS, <http://stats.uis.unesco.org> retrieved March 25, 2013.

3. **At 7 percent in 2010, enrollment rates in higher education in Africa are the lowest across the world regions** (see Table 1). While African countries have been successful in increasing access and enrollment to primary education in recent years, much more is needed to improve enrollments rates for higher education levels. Africa has low numbers of graduates in

agriculture, science, engineering, and health. The latest available numbers for Benin, show that only 0.8 percent of its graduates majored in agriculture, 3.5 in science, 5.6 in engineering, and 2.8 in health. Burkina-Faso, Cameroon, and Ghana have higher numbers of graduates in science, but a similar number of graduates in engineering and health. Burkina-Faso, when compared with the rest of the participating countries for which we have data, has the lowest percentage of graduates in health, with only 0.6 percent of its graduates majoring in this field. Other emerging economies, like Brazil have a much higher percentage of graduates in health (See Table 2).

Table 2. Percentage of higher education graduates by field of study

	Benin (2009)	Burkina Faso (2011)	Cameroon (2010)	Ghana (2011)	Brazil (2010)
Agriculture	0.8	1.5	...	7.4	1.8
Education	-	7.6	10.3	25.6	22.8
Engineering, manufacturing and construction	5.6	2.8	4.0	3.9	5.8
Health and welfare	2.8	0.6	2.3	3.4	13.9
Humanities and arts	14.5	11.4	6.4	-	2.2
Social sciences, business and law	52.5	55.6	59.2	43.2	40.2
Science	3.5	15.0	17.0	15.5	5.5
Services	7.5	5.5	-	-	2.9
Unspecified programs	12.6	-	-	1.1	5.0
Total number of graduates	14638	14782	40327	28005	1024743

Source: UNESCO UIS, <http://stats.uis.unesco.org> retrieved March 25, 2013.

Notes: - negligible
... missing data

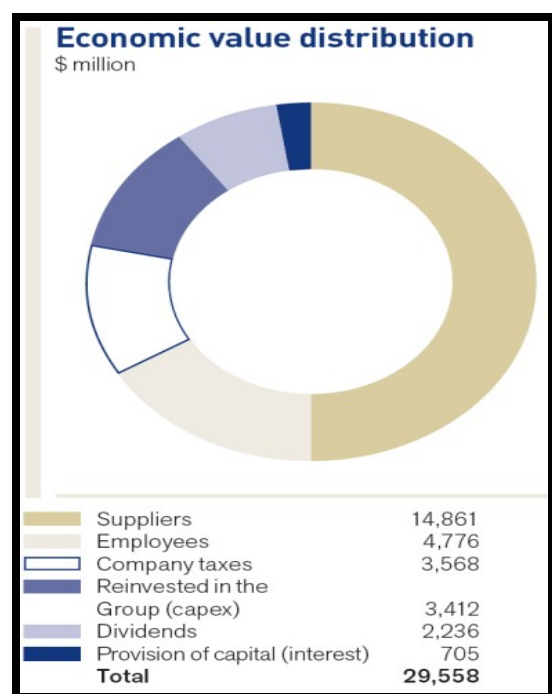
4. **Three positive externalities for investing in Math, Engineering, and science programs in Africa follow.** First, **clustering effects**, skilled workers raise the productivity of non-skilled workers. Math and engineering graduates can advance research, as well as apply and pass on the knowledge to less skilled individuals, making them more productive. In addition, post-graduate students can serve as trainers of trainers to sustain the knowledge effect of passing and fostering knowledge in the educational system. Second, increase of **entrepreneurial activity**; high-skilled workers can foster innovation through more efficient deployment of local resources and creation of new projects that can unlock investments and talent available given the same level of capital. Science and engineering workers make society more able to engage in entrepreneurial activities, while health workers improve a society's health, raising productivity of society in general. Finally, investing in Math, Engineering, and medical programs would have a multiplier effect since the increase in **public and private investments** would lead to higher earnings of graduates, augmenting savings and taxes, which in turn would lead to higher investments. Higher salaries also translate in higher consumption, benefiting producers. These positive externalities, however, assume that graduates of the programs stay in Africa, rather than migrate out of Africa.

5. **Investing in agriculture graduates is essential for Africa's economic growth.** Agriculture is Africa's dominant economic activity. It accounts for 40 percent of GDP, 15 percent of exports, and 60–80 percent of employment (World Bank, 2007). Increasing

agricultural productivity is a necessary condition for economic growth in the region. A higher number of agricultural graduates increase human capital in the region who contribute to agricultural productivity by increasing research, labor force capacity, and support services. Empirical studies suggest that there are significant returns to public investments in agricultural research (Alston et al., 2000; Alston, 2002; Huffman & Evenson, 2006, & Evenson, 2001).

6. Investing in healthcare workers is necessary for a healthy society and higher quality of human capital. First, the number of health workers per 1,000 population is positively correlated with many health care indicators—birth attended by health workers, nurses, or midwives; survival of children in the early period; number of periodic check-ups; HIV testing; and the like. Second, an increase of health workers ultimately also benefits the poor as often the availability of health workers increases in richer areas, but subsequently also in poorer and rural areas. Third, the number of health workers is positively correlated with economic growth (Soucat et al., pp.133).

7. Further, there is a lack of specialized graduates on areas of natural resources and of institutions that are able to provide it in Africa. African countries are becoming involved in mining and extractive industries as they seek to develop their natural resources. The extractive industry sector is of crucial importance for African countries as it can help boost the economy as well as improve their development goals through long-term social policy. Often, companies have to bear the cost of hiring expensive foreign skilled workers—majored in science and engineering. Thus, the Centers of Excellence project is of special relevance as it seeks to fill out the gap created by lack of professionals in these sectors by providing countries with high-skilled science and engineering graduates. Key Benefits from expansion of skills for extractives industries are listed below:

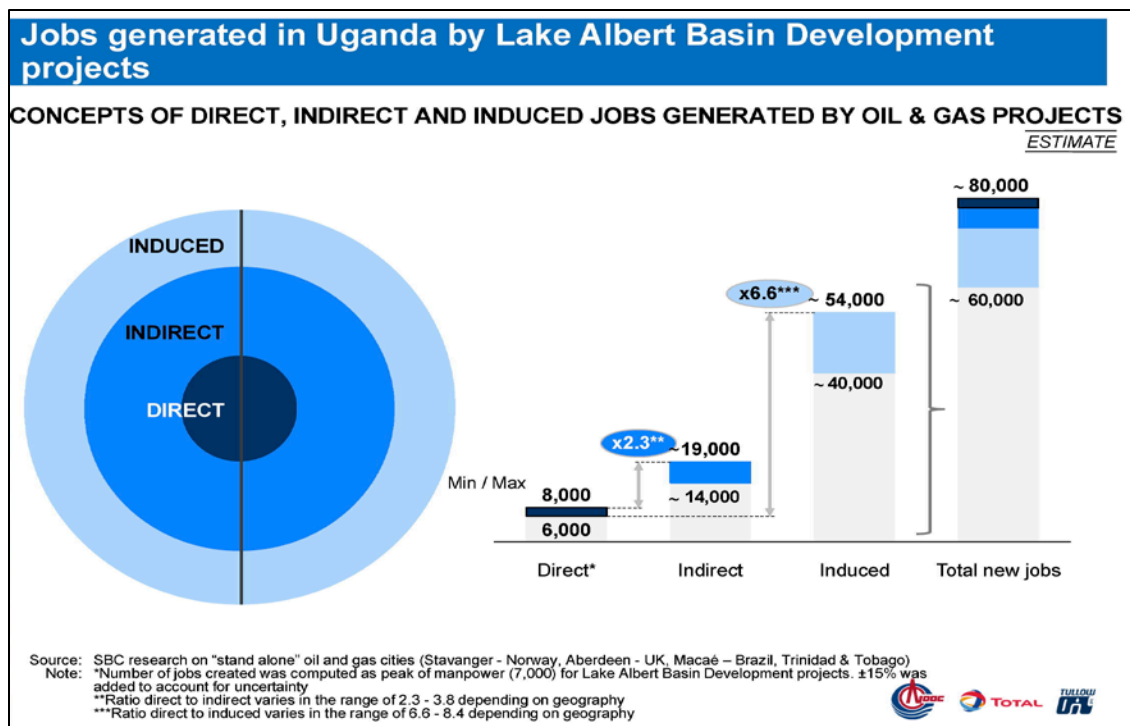


a. Building Specialized Human Capital is a key factor in profiting from the boom in the Oil, Gas and Minerals industries. The results of detailed empirical enquiry into the nature and determinants of the breadth and depth of linkages of the commodities sector in eight SSA countries (Angola, Botswana, Gabon, Ghana, Nigeria, South Africa Tanzania, and Zambia) and six sectors (copper, diamonds, gold, oil and gas, mining services and timber) show that “Skills and the ensemble of institutions which affect the development of firm-level and sector-level capabilities ‘shouts out’ in all of the country-studies as being the single most important determinant of linkage development.” Building specialized human capital has value added for local suppliers, creates a large number of direct and indirect jobs and builds governance capacity.

b. Local skills training is a powerful way of making local enterprises become suppliers to the oil and gas industry, not only large local enterprises but

also small and medium ones. According to the Anglo American 2012 Sustainable Development Report, economic value retained through employment and local procurement accounts for 66% of the total value created through minerals extraction (see Box 1). Compared to retaining the financial revenues from minerals extraction through taxes, royalties, fees etc. paid to government (such as through support to improved fiscal regimes), skills development enables more of the value created from minerals extraction to be retained locally. Increased skills capacity enables higher levels of local employment and local procurement. Investments in people and enabling local communities to maximize benefits from the extractive sector will promote inclusive growth and community empowerment. De Beers has moved many of its downstream diamond activities from the United Kingdom to Botswana - shifting sales, diamond sorting and aggregation businesses and supporting cutting and polishing operations. Making more diamonds available locally shifted more than \$6 billion of annual rough diamond sales from London to Gaborone. An additional 3,200 manufacturing jobs have been created in Botswana since 2007 and 16 locally-based diamond buying companies have been established.

- c. **Africa's growing workforce should be able to capitalize on the direct and indirect employment opportunities generated by sustainable mineral sector growth.** Although the extractive industry is providing comparatively few direct jobs, the potential for job



creation through the local linkages and socio-economic impact of mining operations is significant and should be considered for a fuller picture of the employment effects. According to an International Council for Mining and Metals study (2008), Tanzania's large-scale mining sector had created about 8,000 direct jobs and 45,000 additional ones. (See Box 2 for direct, indirect and induced jobs created in Uganda).

- d. **An upgrade of the knowledge and skills of the regulatory authorities is essential to implement best practice regulation effectively in the extractives sector.** Building resource governance capacity to strengthen national, regional, and local governments and regulatory institutions is critical so they can manage the extractive sector transparently and responsibly. To date, regulation has been characterized by ad hoc negotiations in the award of licenses and concessions, together with technical and administratively based regulatory oversight. Modern, best practice, regulation of the sector involves integrated economic, legal, financial, environmental and technical oversight, by a coordinated and multi-disciplinary regulatory structure.

8. **Market failures in higher education are causing under-investment in the sector.** First, due to information asymmetries, individuals may fail to get to know the actual returns to investments in higher education, leading to underinvestment in their education. Second, there are market failures involved in investments on research and development (R&D), as it is a risky process—including property rights regulations—since research is a public good. Individuals can (mostly) access knowledge once it has been generated, and while some research results are usable only in specific contexts, research is transferable, generating significant knowledge spillovers (Plastina, A., & Fulginiti, I. 2012). Third, research produced in Africa will benefit from the local knowledge in critical areas such as agriculture. Given the externalities from higher education, governments can gain by stepping in and introducing incentives to promote higher skills acquisition by the youth. This is especially relevant as there is a concern among policy makers regarding youth unemployment and underemployment in the region.

9. **The economic rationale for the Centers of Excellence done at a regional-level follows.** First, students graduating from education institutions in the region have high return rates. For example, 84 percent of students that graduate from the International Institute for Water and Environmental Engineering (2iE) in Africa, go back to their country of origin, and 98 percent work in the African continent. Second, costs of tuition, fees, and living expenses are cheaper than similar programs in the United States, although quality may be relatively lower. For example, at the Masters level, tuition cost is approximately US\$ 5 000 a year and onsite housing is approximately US\$ 800 per year in 2iE⁶. In contrast, the average cost of attending college in the US (tuition and living expenses) is approximately US\$ 33,973 for a public school and US\$42,224 for a private school per year⁷. Third, the alternative approach of creating a fee-standing project per country with one Centers of Excellence in each country would require heavy investing in infrastructure and training capacity; countries themselves may not have the necessary demand for these specialized majors and may face limited availability of good-quality teaching and research faculty. Investing in a Center of Excellence per individual country would be expensive and such a project may not be economically feasible or sustainable for many of the smaller countries in the region.

10. **The African Centers of Excellence project will benefit young people in recipient countries as it aims at creating and/or strengthening new Master and PhD programs in already established universities in the region.** There will be spillovers of this project that will

⁶ International Institute for Water and Environmental Engineering, <http://www.2ie-edu.org> retrieved April 25, 2013.

⁷ Figures are for year 2011–2012. Chronicle of higher education, <http://chronicle.com> retrieved April 25th, 2013.

benefit bachelor programs. There are no people who lose if the project is implemented, in contrast, there a number of project beneficiaries. First, the graduate students who will be able to access higher quality graduate programs and have better employment prospects. The ACE project will help the growing number of young people get access to “good jobs”. Second, the firms who will be able to access higher-skilled graduates; and third, society in general by increasing the productivity of the youth.

11. Nonetheless, market failures, if not addressed, could diminish the success of the Centers of Excellence project. First, lack or poor dissemination of information about the new graduate programs can reduce the number of applicants to participant universities. Second, potential students may lack adequate and relevant information regarding the private returns to further skill acquisition, and may chose not to invest in further graduate education. Lack of coordination between Centers of Excellence and governments may hinder the flow of students from college to graduate programs and across countries and sectors in West and Central Africa.

Rates of returns to Higher Education in Africa

12. Private rates of returns for higher education in Burkina Faso, Cameroon, Ghana, and Nigeria, are higher than those for primary and secondary education (see Table 3). Private rates of return were calculated using data from household surveys and applying Mincerian regressions⁸; while there are methodological challenges for their estimation—as the controlling for covariates method does not addresses the endogeneity problem in the estimation caused by unobservable characteristics like ability and motivation—they provide a useful indicator of the productivity of individuals by level of education. The wage-age profile for all countries show that individuals with higher levels of education receive much higher earnings than their counterparts that studied up to primary and secondary levels only. Thus, investing in higher education pays off.

Table 3. Returns to schooling by educational level (latest available year)

Countries	Primary (%)	Lower secondary (%)	Upper secondary (%)	Tertiary (%)
Burkina-Faso	1.7	24	12	2.4
Cameroon	9.8	18	22	30
Ghana	4.8	12	45.6	33
Nigeria	2	10.3	2.7	15

⁸ Following Montenegro and Patrinos (2012), after calculating the “earnings function” the private rate of return to different levels of schooling were derived from: $r_p = (B_p) / (S_p)$, $r_s = (B_s - B_p) / (S_s - S_p)$, $r_t = (B_t - B_s) / (S_t - S_s)$, where s stands for the total number of years of schooling for each level. For primary education, 6 years of schooling were assumed; 3 for lower secondary, 3 for upper-secondary, and 3 for tertiary. where B is the stream of each benefit, C is the opportunity cost of a higher education degree in year t, n is the length of education, m-n is the number of years in the workforce, r is the rate of return.

Source: Author's calculations with latest available household data.

Data: Nigeria Household Survey, 2010-2011; Burkina Faso, Enquete integrale (EICVM) 2008/2009; Cameroon, Troisieme enquete camerounaise aupres des menages: Ecam3 2007; Ghana, Living standards survey (#5) 2005.

Notes: For all countries, the returns to higher education were calculated by using upper secondary as the previous educational level.

Cost-Benefit Analysis

13. **This section presents an economic analysis of the Component I, *Strengthening capacity of selected universities*, of the project using the benefit-cost methodology.** The component I accounts for the largest share (87 percent) of the project investment with the purpose of improving the labor market outcomes from students in target universities. The economic feasibility of the study is examined through the Internal Rate of Return⁹. The calculations were done for four countries where household data were available— Burkina-Faso, Cameroon, Ghana, and Nigeria. However, the results are not comparable across the countries, as data are not standardized. The results should be considered in their own context only.

a. Standing (whose benefits, whose costs)

14. **The analysis can be done for two groups, private and social, depending on whose benefits and cost are counted** (summary below). For the purpose of the project both types of analysis are useful. A cost-benefit considering the private standing is helpful as the project supports individuals to increase their earnings and improve their quality of life. A benefit-cost analysis considering the public standing helps assess the project in light of its costs and expected outcomes for the country as a whole.

15. **A challenge for both private and social return analysis is the difficulty in objectively measuring the benefits of higher education.** In this analysis, benefits are measured by earnings—a proxy for productivity, but it does not quantify in monetary terms the improvements in quality of life of the graduates, mobility, and ability of individuals to re-skilled themselves later in life. For the social analysis, it is difficult to capture the longer-terms benefits of higher educated graduates like the increase in economic growth that comes by investing in human capital, a workforce able to adapt technologies that help countries catch-up faster, and investments that are made possible from higher savings. Therefore, the benefits in this cost-benefit analysis are restricted to only salaries, while disregarding a number of externalities, such as the impact of graduates on co-workers, research on productivity improvements, innovation, and the like.

Table 4. Standing (benefits and costs)

	Benefits	Costs
Private (individual)	(lifelong) Earnings (due to productivity). Employability. Mobility. Quality of life.	Direct cost —Tuition, other fees, textbooks. Indirect (opportunity) cost —Forgone earnings.
Social (public)	Economic Growth —more adaptable labor force, technology adaptation, and entrepreneurship. Externalities —Innovation. Saved expenses —from social benefits.	Project cost —US 8 million by Center of Excellence. State's spending —On higher education per student.

b. Assumptions

16. **The benefit-cost analysis is done per Center of Excellence—assuming one in each of the four countries.** The base-case analysis assumes an “average” individual that has completed high school and is considering the decision to either begin a bachelor degree or enter the workforce. For this individual, the private rates of return are calculated under the following assumptions. The costs and benefits are then multiplied by the number of graduates that are expected to enroll in the graduate programs for the benefit-cost analysis estimation.

- **Opportunity cost**—Represents a loss of productive capacity measured as a loss of earning for the individual that enroll for graduate studies in the Centers of Excellence. It assumes that the student would otherwise not be idle or unemployed.
- **Degree completion**—We assume that an individual who is a university graduate takes four years to complete a degree. While the ACE project targets Master and PhD-level students, the benefit-cost analysis was done for higher education in general—including undergraduates, master, and PhD-students—due to lack of data on wages for advanced degrees in these countries.
- **Direct costs**—These costs are education-related costs—including fees, books, food, uniforms, and transportation. The costs were obtained from the household database.
- **Inflation rate**—Zero rate of inflation so that the wage-experience profiles estimated at one point can be used to life-time wage experience profiles for the graduates of the centers of excellence.
- **Graduates salaries**—The salary of the graduate does not vary during the years. Annual earnings are calculated by multiplying weekly earnings by 52, monthly earning by 12, and so on.
- **Employment**—All graduates find employment after graduation. The sensitivity analysis is done with employment levels at 70 and 50 percent.
- **Benefits**—The difference in the life-stream of both treatment and comparison group is only attributable to attending higher education.
- **Retirement age**—It is assumed that individuals work until they are 60 years.

17. **Table 5 shows the IRR for the project in the four countries.** The IRR ranges from 3 percent in Burkina-Faso, 32 percent in Cameroon, and 18 percent in Nigeria; the rates of return to the project are high, even though the results account for a small fraction of the overall benefits of the project.

Table 5. Private Internal Rate of Return

Countries	Base-case	level	Sensitivity Analysis		level
	Employment 100%		Employment 70%	Employment 50%	
Burkina-Faso	4%		4%		3%
Cameroon	36%		33%		30%
Ghana	28%		26%		25%
Nigeria	17%		16%		15%

Source: Author's calculations with latest available household data.

Data: Nigeria Household Survey, 2010-2011; Burkina Faso, Enquete integrale (EICVM) 2008/2009; Cameroon, Troisieme enquete camerounaise aupres des menages: Ecam3 2007; Ghana, Living standards survey (#5) 2005.

c. Sensitivity analysis

18. **The sensitivity analysis relaxes the base-case assumptions to explore the IRR under different scenarios.** The sensitivity analysis can be done in different ways, for example, we can make different assumptions regarding the time it takes a student to complete a university degree, age of retirement, earnings growth, and the like. The sensitivity analysis was conducted assuming different employment levels among the graduates. We calculated the IRR under the additional scenario of employment level of 70 percent among ACE graduates. It is assumed that after a year of unemployment, ACE graduates find employment. The internal rates of returns remain high under this scenario.

Economic Efficiencies through Changes in Mobility of Students

According to a new study by the UIS, New Patterns in Student Mobility in the Southern Africa Development Community (SADC), 5% of university students from sub-Saharan Africa go abroad in the hunt for knowledge and skills that will give them a competitive edge in the job market.

Regionalization of higher education provides an opportunity to discover new pathways to the expansion of educational opportunities through redirecting student mobility to regional hubs. Table 6 provides estimates of the number of students that are currently pursuing education abroad for four countries, Burkina Faso, Cameroon, Ghana and Nigeria. As can be seen, the outbound mobility ratio is significantly larger than the inbound mobility rates, especially for Burkina Faso and Cameroon. This represents a great opportunity to absorb the students within the region and avoid economic losses of the “brain drain”.

Attempts have been made to calculate the financial cost of a single emigrant departure, taking account of the lost returns from the investment made in educating a doctor or an engineer, plus the amount that the expenditure on this training would have earned, had it been invested in a financial institution, and the additional potential revenues that would have been raised from the taxes he or she would have paid. According to an estimate by The United Nations Commission for Trade and Development (UNCTAD), each migrating African professional represents a loss of US\$ 184,000. These losses can be avoided if students are provided with a n opportunity to gain quality education while staying close to home.

Table 6: Student Mobility Patterns

Mobility Indicators/Countries	Burkina Faso	Cameroon	Ghana	Nigeria
Students abroad				
Total number of mobile students abroad	2,925	20,093	7,845	38,851
(% of global internationally mobile students)	0.1	0.6	0.2	1.1
Outbound mobility ratio	5.7	9.1	2.8	...
Gross outbound enrolment ratio	0.2	1	0.3	0.2
Students hosted				
Total number of mobile students hosted	2,187	1,854	5,682	...
(% of global internationally mobile students)	0.1	0.1	0.2	...
Inbound mobility rate	3.6	0.8	2	...

Source: UNESCO Institute for Statistics Database

Summary of Financial Indicators

19. **The cost of an ACE represents a small portion of the public expenditure on higher education.** The Centers of Excellence project is going to take place over a period of four years. A Center of Excellence will be awarded US\$ 8 million at a maximum. Assuming that each year a center of excellence will receive US\$ 2 million, an ACE only represents 5.2 percent of Benin public expenditure in higher education in a given year, 2.9 percent of Burkina-Faso, 2.0 percent of Cameroon, and 0.4 percent of Ghana (see Table 5).

Table 5: Key financial indicators for higher education

	Benin (2009)	Burkina-Faso (2011)	Cameroon (2010)	Ghana (2011)
Public expenditure on education as % of GDP	5.35	4.01	3.22	5.54
Percentage of public expenditure on higher education.	17.05	19.90	14.61	22.88
Public expenditure on higher education per pupil as a % of GDP per capita.	...	243.05	39.82	...
Total private expenditure on higher educational institutions and administration as a % of GDP.	0.78	0.20
Total public expenditure on higher educational institutions and administration as a % of GDP.	0.58	0.66	0.45	1.44
Total expenditure on tertiary educational institutions and administration as a % of GDP.	...	0.86
GDP ('000) current US\$	6,585,134. 7	10,395,757.5	22,426,024.5	39,199,656.0
Percentage of ACE (US\$ 2 million) as share of public expenditure on higher education	5.2	2.9	2.0	0.4

Source: UNESCO UIS, <http://stats.uis.unesco.org> retrieved April 24, 2013.

Notes: - negligible; ... missing data

II. References for the Economic Analysis

- Alston, J. 2002. Spillovers. *Australian Journal of Agricultural Resources Economics*, 46(3):315–346.
- Alston J.; Marra, M.; Philip, P.; & Wyatt, TJ. 2000. Research returns redux: A meta-analysis of the returns to agricultural R&D. *Australian Journal of Agricultural Resources Economics*, 44(2), pp. 185–215.
- Chronicle of higher education. 2013. *The almanac of higher education 2012*. Retrieved from <http://chronicle.com> on April 25th, 2013.
- Evenson, RE. 2001. *Economic impacts of agricultural research and extension*. In: Gardner BL, Rausser G (eds) *Handbook of agricultural economics*, Vol 1A. North-Holland, New York, pp. 574–628.
- Huffman, WE.; Evenson, RE. 2006. Do formula or competitive grant funds have greater impacts on state agricultural productivity? In *American Journal of Agriculture Economics* 88(4), pp. 783–798.
- International Institute for Water and Environmental Engineering (2iE). 2013. Retrieved from <http://www.2ie-edu.org> on April 25, 2013.
- Montenegro, C.& Patrinos, H. 2012. *Returns to schooling around the world*. Background paper for the World Development Report, 2013.
- Plastina, A., & Fulginiti, I. 2012. Rates of return to public agricultural research in 48 US states. *Journal of Productivity Analysis*, 37:95–113.
- Soucat, A., Scheffler, R., Adhanom, T. 2013. *The labor market for health workers in Africa. A new look at the crisis*. Washington, D.C.: World Bank.
- World Bank. 2007. *Cultivating knowledge and skills to grow African agriculture*. Washington, D.C.: World Bank.

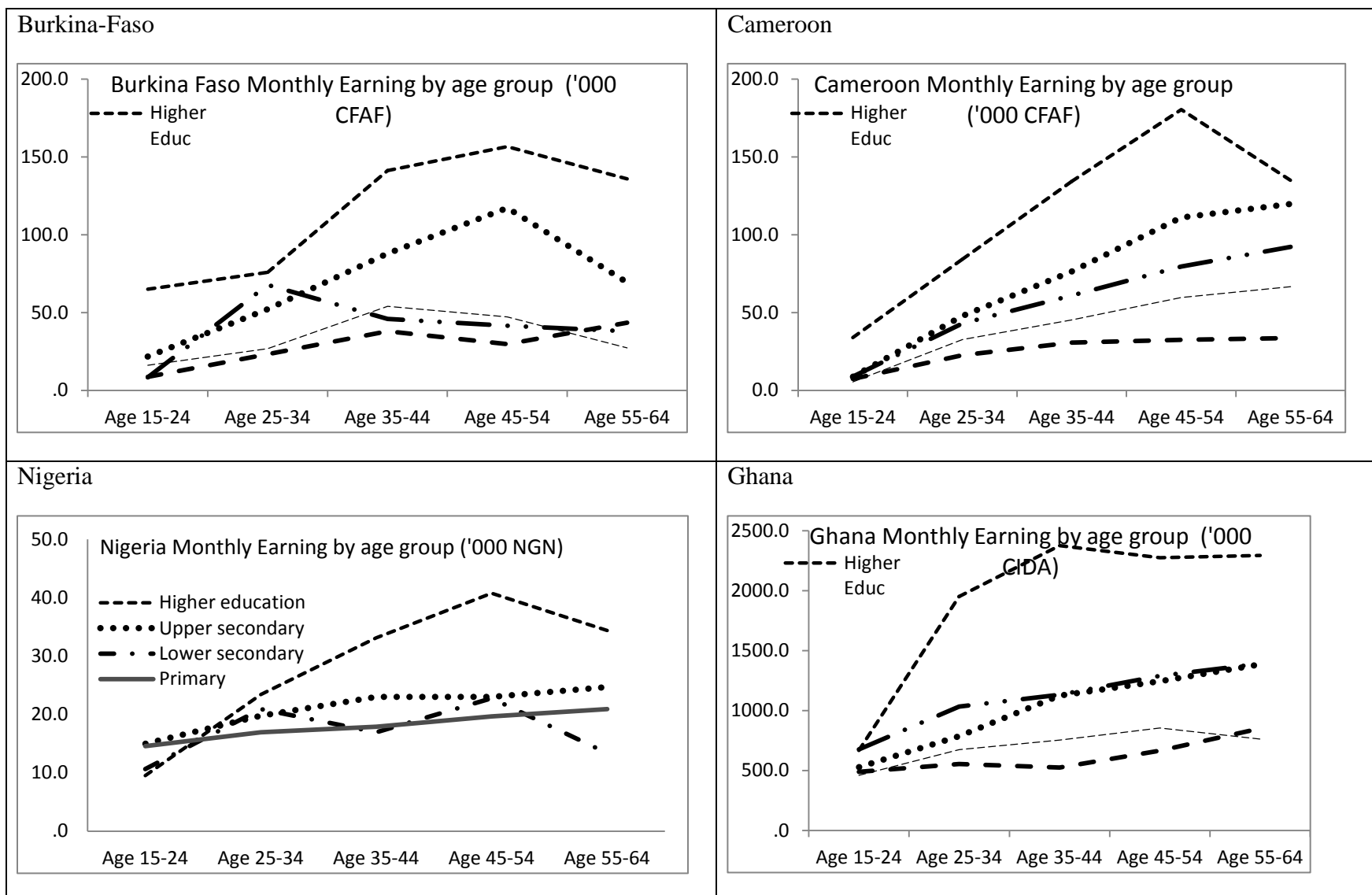
Figure A. Chain of Economic Impacts for Africa Centres of Excellence

The higher order objective	Meet the labor market demands for skills within specific areas where there are skill shortages affecting development, economic growth and poverty reduction.
Development objective	Promote regional specialization among participating universities in areas that address regional challenges and strengthen the capacities of these universities to deliver quality training and applied research.

	Interventions Activities/Inputs	Output	Economic Benefits
Support training And research capacity	<ul style="list-style-type: none"> •Offering new specialized short-term programs, new MA and PhD programs. •Revision of curricula based on industry advice. •Establishing international accreditation. •Upgrade qualifications of faculty. •Increase intake of talented students and faculty. •Support workshops, operating costs, & travel. •Support consultant services for faculty in non-governmental funded activities. •Rehabilitation of facilities. •Provision of learning resources and equipment. 	<ul style="list-style-type: none"> • Number of students enrolled in new specialized Masters, PhDs, and short-term programs. • Number of Internationally accredited training programs. • Number of published research outputs. 	<ul style="list-style-type: none"> • Increased employment salaries. • Increased knowledge production.
Major Assump-tions	<ul style="list-style-type: none"> •The support for training and research capacity is effective. •Revision of the curricula is relevant for market needs. •New programs meet the demand for skills in the regional market. •Qualifications of faculty are adequately upgraded. 	<ul style="list-style-type: none"> • Enough promotion of the new programs. • Students enroll in the different programs. 	<ul style="list-style-type: none"> • Students finished their graduate degrees. • Students acquired skills that are relevant in the labor force and were able to get better employment.



Figure B. Age-earnings profile by level of education



Annex 7: Regional IDA Grant for Association of African Universities
Africa Centers of Excellence Project

Title of proposed project	Regional Facilitation for the Africa Centers of Excellence Project
Project	Africa Centers of Excellence
Region	Africa
Country	Africa Regional
Managing Unit	AFCRI
TTL	Andreas Blom
Focus Area/Theme	Education/Capacity Building
Grant Amount Requested	5,000,000 (including 1,000,000 PPA)
Grant Amount Approved	1,000,000 PPA Approved in July 2013

Grant Recipient

Regional Institution	Location	Contact
Association of African Universities(AAU)	Accra, Ghana	Prof. E. Ehile, Secretary General

I. Background for the regional grant to AAU

1. This annex outlines the proposal for the AAU to host the RFU, and the activities to be funded under the RFU. Fiduciary assessments are summarized in Annex 3 and the performance indicators for the regional facilitation are presented in Annex 1.
2. The RFU will be responsible for the implementation of select cross-cutting interventions, that will be integral to strengthening higher education in the West and Central Africa regions. The RFU host has been identified and selected as part of the ACE project preparation deliverables, because the selected organization will be assigned the key role of delivering most of the ACE project preparatory activities and facilitate institutional project preparation. The organization selected to host the RFU, has high credibility within the higher education community in West and Central Africa and has been extensively involved in capacity building in Africa. Thus, the RFU host is an entity that demonstrates regional reach in its operations and impact, cuts across disciplines, and is not itself, a beneficiary.
3. The RFU host has been selected from a shortlist of African regional organizations involved in capacity building in the continent, in accordance with the following criteria:
 - (i) Have experience in managing donor funds;
 - (ii) Has long term mandate in higher education;
 - (iii) Has established and proven working relationships with higher education institutions;
 - (iv) Demonstrates evidence of experience in working across sectors;
 - (v) Shows evidence (based on due diligence World Bank assessments) of well established institutional and fiduciary capacity, and if weak, has a credible plan to build such a capacity (procurement, FM, environment)to implement World Bank supported interventions;
 - (vi) Demonstrates evidence of regional coverage across thematic areas;

- (vii) Has bilingual working ability (French and English); and
 - (viii) Has demonstrated experience in regional project implementation and coordination.
4. Consistence with the selection criteria described above, during the selection process. The project considered several other African Regional organizations, however these organizations were not favorably considered due to their limitations regarding their limited development and operational mandates, coverage and scope of work in Africa as well as other limitations including language challenges. Additionally regional economic communities (RECs), although with political mandate are not technical higher education agencies as such the RECs will role in the project will be of policy harmonization within higher education in their respective regions.
 5. Based upon the foregoing context, the Association of African Universities (AAU), was selected as the organization to host the RFU and to undertake, among other functions, regional ACE project preparatory activities (outlined in the RFU terms of reference) as well as establish teams capable of facilitating regional project implementation. Moreover, AAU is considered to be uniquely the strongest African regional organization with ability to scaling-up project operations with impact.
 6. AAU is an African regional organization based in Accra, Ghana where it is incorporated as an international not-for-profit organization with a Headquarters Agreement with the Government of Ghana. AAU is also a membership-based organization with operational mandate and focus being on higher-education. It was set up on November 12, 1967, by 34 universities in Africa with the mission of enhancing the quality and relevancy of higher education in Africa and strengthening AAU's contribution to Africa's development. As of February 2013, AAU has a combined membership of 278 public and private universities drawn from 46 African countries. AAU's vision therefore, advocates for higher education in Africa, with the capacity to assist its member organizations in meeting their national, regional and continental development needs.
 7. Table 1 below illustrates how AAU is uniquely best positioned as the African regional organization that best meets the Regional IDA eligibility criteria for accessing IDA Grants for Regional institutions, and is most suitable to host and operate the RFU, as well as undertake ACE preparatory and regional activities.

Table 7.1: IDA Eligibility for Access to IDA Grants by Regional Institutions (this is for Regional Facilitation Unit, to be hosted within the Association of African Universities - AAU)

Eligibility Criteria	Africa Centers of Excellence Project
1. Recipient is a bona fide regional organization that has legal status and fiduciary capacity to receive grant funding and legal authority to carry out the activities financed	<ul style="list-style-type: none"> • Association of African Universities (AAU) is the apex organization and forum for consultation, exchange of information and co-operation among institutions of higher education in Africa. • The activities to be financed by the grant are covered under Article II of the AAU Constitution. • The AAU has received World Bank financing before and has had an FM assessment finding the organization capable of receiving

	IDA grant. The procurement assessment is in process.
2. The recipient does not meet eligibility requirement to take on an IDA credit	<ul style="list-style-type: none"> • The Association of African Universities (AAU) is a regional organization that services all higher education institutions in Africa and is not owned by one particular country hence does not meet the IDA requirement to take on IDA Credit. • The activities include regional capacity building and policy development. • Countries have not yet been selected and it is difficult for countries to fund these activities.
3. The costs and benefits of the activity to be financed with an IDA grant are not easily allocated to national programs	<ul style="list-style-type: none"> • The AAU is a regional organization serving all universities in Africa with specific programs for universities and regional students in West Africa, thus the benefits obtained are of a regional nature and cannot be credited for specific national countries.
4. The activities to be financed with and IDA grant are related to regional infrastructure development, institutional cooperation for economic integration, and coordinated interventions to provide regional public goods	<ul style="list-style-type: none"> • The IDA grant will support institutional cooperation and coordinated interventions between the universities, as well as support coordinated policy interventions and capacity building at a regional level providing regional knowledge spillovers.
5. Grant co-financing for the activity is not readily available from other development partners	<ul style="list-style-type: none"> • The project has sought development partners financing, however given that the AAU is set to host the regional facilitation unit for the Africa Centers of Excellence project (IDA funded project), DPs found it better that these activities be funded by the World Bank. As the project progresses there is potential for others to contribute. As such IDA grant is the best option given the urgency and nature of the activities.
6. The regional entity is associated with IDA funded regional operation involving some of the participating member states.	<ul style="list-style-type: none"> • The AAU will be host to the Regional Facilitation Unit of the Africa Centers of Excellence project as such be associated to an IDA funded regional operation.

8. In addition to having technical experience and know-how as well as intellectual leadership, AAU is also solidly founded upon a sound institutional and managerial base, with effective governance systems, technical coordination and operational set-ups that are in place and practiced. Moreover, AAU has the necessary fiduciary record, as laid out in Annex 3, and has been satisfactorily assisted the governments, institutions and the Bank in preparing the ACE project through the PPF.
9. In the context of the above, the AAU was found to be best-suited to be the recipient organization and executing Agency of the World Bank Recipient Executed PPF grant of 1,000,000 and the subsequent \$4,000,000 IDA Regional Grant. As the leading higher education collaborative partner on ground and an intellectual leader who works in partnership with other country and regionally-based higher education, research and capacity-building institutions. The project sees AAU having an integral role in the successful implementation of the ACE project. AAU has a dual niche of nurturing higher education as well as harnessing lessons from higher education analytical work, which, along with its wealth of

experience in the field, it uses to support capacity-building activities, and to meaningfully engage in higher education policy dialogue, related advocacy for positive policy change and development impact.

II. Purpose of the Grant

10. AAU has received a PPA of \$1,000, 000 and it is in this respect, that AAU is seeking IDA financial support to continue to host the regional facilitation unit of the project.

11. The PPA has been progressing in a satisfactory manner with the following critical activities being supported under the PPA:

- a. Coordinating and facilitating the selection and evaluation process of the 52 submitted proposals for Africa Centers of Excellence;
- b. Supporting selected Project participating institutions in the proposal improvement process;
- c. Supporting the preparation of memoranda of understanding to be entered into between ACEs and partner institutions;
- d. Undertaking baseline studies and other monitoring and evaluation activities for the Project results framework;
- e. Supporting the completion of the registration/incorporation update of the Recipient to ensure full legal personality, and the establishment of a Project steering committee;
- f. General Facilitation and Coordination, Communication and Information dissemination regarding project preparations, and
- g. Capacity Building and Operation of RFU secretariat

12. In particular, the AAU's role in organizing the all-important educational, scientific, and leadership evaluation of the proposals and their submitting institutions in a transparent and merit-based manner was commendable. Subsequently, AAU has played an important role in the preparation of the M&E aspects.

III. Detailed Regional capacity, evaluation and facilitation for financing

13. Proceeds of the grant will finance the remaining project preparation and implementation activities required for the ACE project as outlined below.

14. Facilitation, Coordination and Administration. Tasks include:

- i. support the capacity building, knowledge sharing and coordination between the ACEs and partner institutions through joint lessons learning and capacity building events
- ii. serve as the facilitation secretariat between the different project stakeholders including supporting the coordination between the ACEs with concerned Ministries/ Departments of national Governments and the World Bank,
- iii. administer scholarships to ACE countries in requested thematic areas
- iv. be responsible for overseeing implementation of cross-cutting intervention tasks such as policy studies for regional mobility and other relevant tertiary education issues

- v. organizing two annual supervision missions;
- vi. quarterly meetings between ACEs and Regional Facilitation Secretariat.
- vii. prior to the supervision missions, semi-annual reports on Project implementation will be prepared by the ACEs with the support of the Facilitation Secretariat.
- viii. coordinate and fund the activities of the Project Steering Committee, including facilitating the bi-annual SC meetings.
- ix. support the provision of technical assistance to ACEs in thematic and other tertiary education areas as requested
- x. Manage all recurrent operating activities that are required to effectively facilitate the preparation of the ACE project

15. Provide Monitoring and Evaluation support to the ACEs in particular:

- xi. overall data collection for monitoring and evaluation
- xii. support in M&E activities including report updating
- xiii. aggregating reports from all the ACEs into one
- xiv. guide the operations of Monitoring and Evaluation Specialists in ACEs and Partner institutions through providing advice and operating as a support role for issues(problems and solutions) raised by ACEs and partner institutions,
- xv. support the development of procedures for regular monitoring of performance of Project Institutions,
- xvi. conduct/ commission impact evaluation of training programs and various types of other studies, and disseminate the findings, and
- xvii. publish on its website results of all national level selections, findings from monitoring and evaluation studies and such other information as required under Disclosure Management Framework.

16. Technical assistance to support regional higher education policy and science and technology agenda through ECOWAS and UEMOA and other regional bodies

17. Communication and Information Dissemination. Provide the platform for communication for the ACE project, specifically:

- i. advertise in regional and national print and electronic media, information on the ACE project
- ii. publishing on ACE website ACE selections and all other information relevant for dissemination to wider public
- iii. provide platform of information for ACE selection via online facilitation
- iv. publish and disseminate / communicate evaluation results and information on successful ACEs
- v. facilitate and support knowledge sharing and networking between the ACEs and partner institutions