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Report No: PAD1162

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR 10.0 MILLION  
(US\$14 MILLION EQUIVALENT)

AND A

PROPOSED GRANT

IN THE AMOUNT OF SDR 13.5 MILLION  
(US\$19 MILLION EQUIVALENT)

TO THE

REPUBLIC OF MALI

FOR A

HIGHER EDUCATION SUPPORT PROJECT

April 16, 2015

Education Global Practice  
Africa Region

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## CURRENCY EQUIVALENTS

Exchange Rate Effective January 31, 2015

Currency Unit = FCFA  
FCFA 558 = US\$1  
US\$ 1.40980 = SDR 1

## FISCAL YEAR

January 1 – December 31

## ABBREVIATIONS AND ACRONYMS

AAU	Association of African Universities
ACE	African Centers of Excellence
AfDB	African Development Bank
AWP	Annual Work Plan
CA	Board of Trustees ( <i>Conseil d'Administration</i> )
CAMES	African Higher Education Council ( <i>Conseil Africain et Malgache de l'Enseignement Supérieur</i> )
CAS	Country Assistance Strategy
CENOU	National Center of University Works
CFA Franc	Currency of the West African Economic and Monetary Union (UEMOA)
CP	Advisory Board on Programs ( <i>Conseil de Perfectionnement</i> )
CSR	Country Status Report
DA	Designated Account
DAF	Direction of Financial Services ( <i>Direction des affaires financières</i> )
DLI	Disbursement Linked Indicator
DNACPN	National Department for the Clean-up and Control of Pollution and Pollutants ( <i>Direction nationale de l'assainissement et du contrôle de la pollution et des nuisances</i> )
DNESRS	National Directorate of Higher Education and Scientific Research ( <i>Direction Nationale de l'Enseignement Supérieur et de la Recherche Scientifique</i> )
EA	Environmental Assessment
ECOWAS	Economic Community of West African States
EEP	Eligible Expenditure Program
EIA	Environmental Impact Assessment
ENI	National School of Engineering ( <i>Ecole Nationale d'Ingénieurs</i> )
ESIAU	International school of Architecture ( <i>Ecole Supérieure Internationale d'Architecture et d'Urbanisme</i> )
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FDI	Foreign Direct Investment
FM	Financial Management
GDP	Gross Domestic Product
GER	Gross Enrollment Rate
GoM	Government of Mali
GRS	Grievance Redress Service
HE	Higher Education

HEI	Higher Education Institution
HESP	Higher Education Support Project
IBRD	International Bank for Reconstruction and Development
ICAS	Investment Climate Assessments and Surveys
ICT	Information and Communications Technology
IDA	International Development Association
IDF	Institutional Development Fund
IDP	Institutional Development Plan
IFR	Interim Unaudited Financial Report
IPRK	<i>Institute Polytechnic Rural of Katibougou</i>
ISN	Interim Strategy Note
IPF	Investment Project Financing
IMF	International Monetary Fund
ISA	International Standards on Auditing
KPI	Key performance indicator
LMD	Bachelor - Masters - Doctorate System (3-5-7)
MDG	Millennium Development Goal
MIS	Management and Information System
MoEF	Ministry of Economy and Finance
MoHE	Ministry of Higher Education and Scientific Research
NCB	National Competitive Bidding
NICHE	Netherlands Post-Secondary Education Capacity Building Project
NREN	National Research and Education Network
OP/BP	Operational Policy/Bank Policy
PACTICE	ICT Support Project ( <i>Projet d'Appui à la mise en place de Technologies d'Information et de Communication</i> )
PADES	Higher Education Support Project ( <i>Projet d'appui au développement de l'enseignement supérieur</i> )
PAES	Higher Education Support Project ( <i>Projet d'appui à l'enseignement supérieur</i> (supported by UNESCO))
PBF	Performance-based financing
PDO	Project Development Objective
PFMM	Project Financial Management Manual
PIU	Project Implementation Unit
POM	Project Operational Manual
PP	Procurement Plan
PPF	Project Preparation Fund
PPM	Project Procurement Manual
PPU	Planning and Prospective Unit
PSC	Project Steering Committee
PRED	<i>Programme de Relance Economique et de Développement</i>
PRODEC	Education Development Program ( <i>Programme décennal de l'éducation</i> )
PSU	Planning and Statistics Unit
PTC	Project Technical Committee
QA	Quality Assurance
RAP	Resettlement Action Plan
RF	Results Framework
RPF	Resettlement Policy Framework
SCD	Systematic Country Diagnostic
SIGES	Higher education MIS system ( <i>Système d'information et de gestion de l'enseignement supérieur</i> )

SNESUP	National Union of Higher Education ( <i>Syndicat national des enseignants du supérieur</i> )
S&T	Science and Technology
SSA	Sub-Saharan Africa
STEM	Science, Technology, Engineering, and Math
SORT	Systemic Operational Risks Rating Tool
SWAp	Sector-Wide Approach
SYSCOHADA	Organization for the Harmonization of Business Law in Africa (OHADA) System
TRD	Teaching and Research Department
TVET	Technical and Vocational Education and Training
UEMOA	West African Economic and Monetary Union ( <i>Union économique et monétaire de l'Afrique de l'Ouest</i> )
ULSHB	University of Social Studies and Humanities of Bamako
UOS	University of Ségou
USJPB	University of Legal and Political Science of Bamako ( <i>l'Université des Sciences Juridiques et Politiques de Bamako</i> )
USSGB	University of Social Science and Management of Bamako ( <i>l'Université des Sciences Sociales et de Gestion de Bamako</i> )
USTTB	University of Science, Technique and Technology of Bamako ( <i>l'Université des Sciences, Techniques et Technologies de Bamako</i> )
WAAPP	West African Agriculture Productivity Project
WACREN	West and Central African Research and Education Network
WAEMU	West African Monetary Union

Regional Vice President:	Makhtar Diop
Country Director:	Paul Noumba Um
Senior Global Practice Director:	Claudia Maria Costin
Practice Manager/Manager:	Peter N. Materu
Task Team Leader:	Pierre J. Kamano

**Republic of Mali: Higher Education Support Project**  
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**PAD DATA SHEET***Mali**Higher Education Support Project (P151318)***PROJECT APPRAISAL DOCUMENT***AFRICA*

Report No.: PAD1162

<b>Basic Information</b>			
Project ID P151318	EA Category B - Partial Assessment	Team Leader(s) Pierre Joseph Kamano	
Lending Instrument Investment Project Financing	Fragile and/or Capacity Constraints [ ]		
	Financial Intermediaries [ ]		
	Series of Projects [ ]		
Project Implementation Start Date 7-May-2015	Project Implementation End Date 30-Jun-2020		
Expected Effectiveness Date 07-September-2015	Expected Closing Date 31-Dec-2020		
Joint IFC No			
Practice Manager/Manager Peter Nicolas Materu	Senior Global Practice Director Claudia Maria Costin	Country Director Paul Noumba Um	Regional Vice President Makhtar Diop
Borrower: Ministry of Economy and Finance			
Responsible Agency: Ministry of Higher Education and Scientific Research			
Contact: Telephone No.:	Sékou B. Traore 22320792492	Title: Email:	Secretary General s.boukadary@gmail.com
<b>Project Financing Data(in USD Million)</b>			
[ ] Loan	[ X ] IDA Grant	[ ] Guarantee	
[ X ] Credit	[ ] Grant	[ ] Other	
Total Project Cost:	33.00	Total Bank Financing:	33.00
Financing Gap:	0.00		

Financing Source							Amount
BORROWER/RECIPIENT							0.00
International Development Association (IDA)							14.00
IDA Grant							19.00
Total							33.00
<b>Expected Disbursements (in USD Million)</b>							
Fiscal Year	2016	2017	2018	2019	2020	2021	
Annual	3.00	7.00	10.00	8.00	5.00	0.00	
Cumulative	3.00	10.00	20.00	28.00	33.00	33.00	
<b>Institutional Data</b>							
<b>Practice Area (Lead)</b>							
Education							
<b>Contributing Practice Areas</b>							
<b>Cross Cutting Areas</b>							
[ ] Climate Change							
[ ] Fragile, Conflict & Violence							
[ ] Gender							
[ X ] Jobs							
[ ] Public Private Partnership							
<b>Sectors / Climate Change</b>							
Sector (Maximum 5 and total % must equal 100)							
Major Sector	Sector		%	Adaptation Co-benefits %	Mitigation Co-benefits %		
Education	Tertiary education		70				
Education	Vocational training		30				
Total			100				
<input checked="" type="checkbox"/> I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.							
<b>Themes</b>							
Theme (Maximum 5 and total % must equal 100)							
Major theme	Theme		%				
Human development	Education for the knowledge economy		80				
Human development	Other human development		20				
Total			100				



<b>Proposed Development Objective(s)</b>		
The development objective of the proposed Mali Higher Education Support Project (HESP) is to improve the relevance of selected higher education programs and the stewardship of the higher education system in Mali.		
<b>Components</b>		
<b>Component Name</b>	<b>Cost (USD Millions)</b>	
Component 1: Support to Selected Public Higher Education Institutions	22.00	
Component 2: Higher Education System Support	8.00	
Component 3: Project Management and Technical Assistance	3.00	
<b>Systematic Operations Risk- Rating Tool (SORT)</b>		
<b>Risk Category</b>	<b>Rating</b>	
1. Political and Governance	Substantial	
2. Macroeconomic	Moderate	
3. Sector Strategies and Policies	Moderate	
4. Technical Design of Project or Program	Moderate	
5. Institutional Capacity for Implementation and Sustainability	Substantial	
6. Fiduciary	Substantial	
7. Environment and Social	Substantial	
8. Stakeholders	Substantial	
<b>OVERALL</b>	Substantial	
<b>Compliance</b>		
<b>Policy</b>		
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 ]
Does the project meet the Regional criteria for readiness for implementation?	Yes [ X ]	No [ ]
<b>Safeguard Policies Triggered by the Project</b>	<b>Yes</b>	<b>No</b>
Environmental Assessment OP/BP 4.01	<b>X</b>	
Natural Habitats OP/BP 4.04		<b>X</b>
Forests OP/BP 4.36		<b>X</b>
Pest Management OP 4.09		<b>X</b>

Physical Cultural Resources OP/BP 4.11			<b>X</b>
Indigenous Peoples OP/BP 4.10			<b>X</b>
Involuntary Resettlement OP/BP 4.12	<b>X</b>		
Safety of Dams OP/BP 4.37			<b>X</b>
Projects on International Waterways OP/BP 7.50			<b>X</b>
Projects in Disputed Areas OP/BP 7.60			<b>X</b>
<b>Legal Covenants</b>			
<b>Name</b>	<b>Recurrent</b>	<b>Due Date</b>	<b>Frequency</b>
Financial management software		01-Oct-2015	
<b>Description of Covenant</b>			
The Recipient shall customize the accounting software to the Project's features not later than one (2) months after project effectiveness			
<b>Name</b>	<b>Recurrent</b>	<b>Due Date</b>	<b>Frequency</b>
Internal auditor		01-Dec-2015	
<b>Description of Covenant</b>			
The Recipient shall appoint an internal auditor not later than four (4) months after the Effective Date, whose qualifications and experience and terms of reference shall be acceptable to the Association			
<b>Name</b>	<b>Recurrent</b>	<b>Due Date</b>	<b>Frequency</b>
External auditor		01-Jan-2016	
<b>Description of Covenant</b>			
The recipient shall recruit an external auditor whose qualifications, experience and terms of reference shall be acceptable to the Association, not later than five (5) months after the effective date			
<b>Name</b>	<b>Recurrent</b>	<b>Due Date</b>	<b>Frequency</b>
Independent verifiers		01-Dec-2015	
<b>Description of Covenant</b>			
The Recipient shall, not later than four (4) months after the Effective Date, appoint external monitoring and evaluation experts ("Independent Verifiers"), to act as third-party verifiers of the proper fulfillment of the disbursement-linked indicators (DLIs) set forth in Schedule 4 to the Financing Agreement			
<b>Conditions</b>			
<b>Source Of Fund</b>	<b>Name</b>	<b>Type</b>	

IDA	Project Operational Manual	Effectiveness	
<b>Description of Condition</b>			
The Project Operational Manual has been adopted in form and substance satisfactory to the Association.			
<b>Source Of Fund</b>	<b>Name</b>	<b>Type</b>	
IDA	HEIs contracts	Effectiveness	
<b>Description of Condition</b>			
The selected Participating Higher Education Institutions (HEIs) contracts have been executed in form and substance satisfactory to the Association on behalf of the Recipient and the Participating HEIs.			
<b>Source Of Fund</b>	<b>Name</b>	<b>Type</b>	
IDA	Eligible Expenditure Programs (EEPs) spending and assessment report	Disbursement	
<b>Description of Condition</b>			
No withdrawal shall be made for payments made under Category (1) unless the relevant EEPs Spending and Assessment Report has been submitted to, and found satisfactory by the Association in accordance with the Independent Verification Reports			
<b>Source Of Fund</b>	<b>Name</b>	<b>Type</b>	
IDA	Disbursement-Linked Indicators	Disbursement	
<b>Description of Condition</b>			
No withdrawal shall be made for payments made under Category (1) unless any applicable Disbursement-Linked Indicators and Disbursement-Linked Results as set forth in the table in Schedule 4 to the Financing Agreement have been met by the Recipient satisfactory to the Association and in accordance with the respective applicable Participating HEI Contract			
<b>Team Composition</b>			
<b>Bank Staff</b>			
<b>Name</b>	<b>Role</b>	<b>Title</b>	<b>Unit</b>
Pierre Joseph Kamano	Team Leader (ADM Responsible)	Senior Education Specialist	GEDDR
Mahamadou Bambo Sissoko	Procurement Specialist	Senior Procurement Specialist	GGODR
Celestin Adjalou Niamien	Financial Management Specialist	Sr. Financial Management Specialist	GGODR
Alice Diarra Sangare	Team Member	Team Assistant	AFCW3

Andreas Blom	Team Member	Lead Education Economist	GEDDR		
Bleoue Nicaise Ehoue	Team Member	Senior Agriculture Economist	GFADR		
Emanuela Di Gropello	Team Member	Program Leader	AFCW3		
Emmanuel Ngollo	Team Member	Consultant	GENDR		
Janet Omobolanle Adebo	Team Member	Program Assistant	GEDDR		
Maman-Sani Issa	Safeguards Specialist	Senior Environmental Specialist	GENDR		
Ruxandra Costache	Counsel	Counsel	LEGAM		
Salamata Bal	Safeguards Specialist	Senior Social Development Specialist	GSURR		
Yeyande Kasse Sangho	Team Member	Senior Agribusiness Specialist	GFADR		
<b>Extended Team</b>					
<b>Name</b>	<b>Title</b>	<b>Office Phone</b>	<b>Location</b>		
Audrenne Eloit	Consultant, Higher Education				
Kalilou Sylla	Consultant, Education				
Quyhn Nguyen	Consultant, Economics of Education				
<b>Locations</b>					
<b>Country</b>	<b>First Administrative Division</b>	<b>Location</b>	<b>Planned</b>	<b>Actual</b>	<b>Comments</b>
<b>Consultants (Will be disclosed in the Monthly Operational Summary)</b>					
Consultants Required? Consulting services to be determined					

## I. STRATEGIC CONTEXT

### A. Country Context

1. Mali is in the process of stabilization following the political and security crisis of 2012. Mali is a large, landlocked country with a fast growing population of approximately 14.9 million people. Insecurity in the north of Mali led to a rebel attack in December 2011 in which the three main regions of the north fell under rebel control. This was followed by a *coup d'état* in March 2012 and the establishment of a *de facto* military government. These developments led to the suspension of support from major donors to the country, with negative consequences for the economy. With support from the international community, the country has returned to relative normalcy with a President and National Assembly democratically elected in 2013.

2. Despite strong support from the international community with the launch of the peace process negotiations between armed groups and the government, as well as the unprecedented funding support of the *Programme de Relance Economique et de Développement (PRED)* amounting to Euro 3.2 billion in May 2013, many security and political challenges remain. In particular, the security context remains challenging with regions in the north very unsafe (particularly rural areas). Peace negotiations resumed on February 15, 2015 in Algiers and an agreement was signed on March 1, 2015 but only included the Government and some of the rebel groups. There is a significant need for sustained support to promote capacity-building and strengthening of the national institutions in place following the crises and in light of the current fragile country context. Providing more economic opportunities for young Malians and greater institutional capacity building remains urgent.

3. While the country experienced sustained economic growth between 2006 and 2011 (averaging five percent per annum), Mali's gross domestic product (GDP) declined during the crisis. GDP rebounded in the subsequent two years, and in 2013 GDP per capita had been restored to its 2011 levels (US\$667). Mali's economy is heavily reliant on the country's natural resource endowment and a number of key sectors for economic growth. Since 2001, rapid expansion of mining production and exports, coupled with an increase in the volume of cotton exports, and improved output and productivity in the production for the domestic market, have been key determinants of economic growth. The sectors which contribute the most to GDP in Mali are agriculture (21.9 percent); trade – notably in the informal sector (16.6 percent); livestock (9.7 percent); and mining, largely gold (5.7 percent). These sectors employ roughly 80 percent of the labor force, with the skilled workforce coming predominantly from neighboring countries. The most important sectors in terms of their contribution to GDP (i.e., agriculture and livestock) are primarily concentrated in rural areas where the large majority of the population is poor and vulnerable.

4. The political and security crisis severely impacted the economy with a substantial deterioration in the delivery of social services, and a contingent increase in the country's vulnerability to exogenous shocks (security crisis, climate change, pests, and commodity prices). Mali's economic fragility is further exacerbated by structurally entrenched obstacles to growth, including a poor investment climate, limited and poorly maintained infrastructure, and limited and inadequate skills, particularly among young workers. A critical challenge will entail addressing the chronically low qualifications of the Malian labor force in the country's emerging

formal labor market. The majority of Malians (65 percent) have no education and the average years of schooling amongst adults is 2.4 years. The status quo does not adequately address the needs of existing employers in the formal sector who complain of persistent difficulties in recruiting appropriately skilled workers, and it also undermines the county's potential for growth and economic diversification, and limits poverty reduction. The skills shortage is demonstrated by an increase in the demand for specialized human capital from rapid growth sectors (extractive industries, energy, water, infrastructure, and in service sectors) and the concurrent growth in vacancies. Low levels of labor productivity, moreover, undermine the economic performance of the informal sector. The existing mismatch between the level of skills demanded by the labor market and the skills of workers seeking employment was further exacerbated by the recent crisis which resulted in many skilled workers (who can compete in the sub-regional market) leaving the country.

5. The recognition of this skills gap has led the Government to conclude that, without an ambitious skills development program that imparts entrepreneurial and labor skills commensurate with the requirements of a dynamic economy, it will not be able to implement an economic diversification strategy, compete in a globalized regional and world economy or escape the vicious cycle of drought, famine, insecurity and population displacement which have led to poverty and inequity. The Government's 2009 National Policy and Strategy for Higher Education Development, and the 2011 National Policy on Technical and Vocational Training were developed in response to these concerns. It is on this basis that the Government has been implementing a World Bank-supported operation<sup>1</sup> which aims at improving youth employability through education and training and private-sector led job opportunities and, to this end, strengthening public and private secondary technical and vocational education and training (TVET) institutions in key selected sectors and supporting dual apprenticeships programs and entrepreneurship. Similar efforts need to be undertaken at the level of tertiary education to complete the skills value-chain necessary for the upgrading of the economy.

### *Situations of Urgent Need of Assistance or Capacity Constraints*

6. Mali made progress in reducing the rate of poverty from 55.6 in 2001 to 43.6 percent in 2010; however, due to the impact of climate change and political crisis poverty increased to 46.1 percent in 2012. The prevalence of poverty remains high, particularly in rural areas where almost three-quarters (73 percent) of the country's population resides and whose livelihood depends largely on agriculture and livestock. The dependence of the rural economy on the environment increases the country's vulnerability to degradation of soil, climate change and other exogenous shocks.<sup>2</sup> The confluence of climate change and the degradation of pasture and agricultural land have resulted in greater levels of food insecurity and malnutrition, further contributing to high levels of poverty.

7. The political and security crisis detrimentally affected an already weak education system at a time when improving economic opportunities for youth to consolidate political stability was already imperative. First and foremost, in the short-term, there is an urgent need to address

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<sup>1</sup> The Skills Development and Youth Employment Project (P145861) (US\$63 million) was approved in June 2014.

<sup>2</sup> According to the 2014 geography of poverty in Mali, 80 percent of rural jobs are in agriculture (including herding, farming, and fishing).

unemployment through the development of relevant skills among youth. Second, investment in education will help build confidence in the education system and hope for the future.

8. In this context, *strengthening the higher education sub-sector in Mali can help address the twin goals of improving shared prosperity and reducing extreme poverty*. This is visible at both the private level and social levels<sup>3</sup>. At the private level, on average, if a household head has a tertiary education, the household is less likely to fall into the bottom 40 percent in terms of poverty. The significant rates of return to higher education, also in the agriculture sector, indicate that individuals, including those who are relatively poor, can gain better employment and salaries and will be more likely to save and invest for their future. On the public side, higher investment in research and development, more effective absorption, application, generation and transfer of knowledge, skills and technology, increased tax revenues and consumption stimulus from the private sector, more effective political and social discourse, stronger governance and better public health are some of the outcomes related to the strengthening of higher education.

9. A strengthened and improved higher education system in Mali will contribute to addressing key constraints to agricultural production through: a) the development of technical skills to support improved productivity in the agricultural sector; and b) the development of entrepreneurial and business skills to encourage growth and diversification of agricultural businesses, processing and transformation; and strengthened supply chains and improved access to markets. A functional and empowered higher education sub-sector also has the potential to promote technical innovation in areas such as seed development and irrigation, and to increase agricultural production and labor productivity. The cumulative effect of these outcomes have the potential to positively impact the expansion of job opportunities and the earnings potential for households in rural areas, contributing, in the short-term, to the reduction of poverty and improved equity. Moreover, an increase in the supply of better trained higher education graduates will help to improve educational outcomes in primary and secondary education, through improved teaching (complementing other operations in basic and post-basic education and training), and in turn improve the skills of children and youth. Targeting disadvantaged groups through improved access to tertiary education has the potential to reduce disparities for future generations.

10. It is important to take advantage of the limited window of opportunity to strengthen the higher education system in order to promote short- and long-term economic growth. The region is currently investing in skills development to attract investment and increase its share of prosperity. With a strong focus on skills enhancement, Mali could convert its natural capital into sustainable economic activities that can generate longer-term social and economic benefits. Overall, the conditions seem favorable to seize this unique opportunity; progress in political normalization is encouraging but needs to be strengthened. Sub-Saharan Africa (SSA) is set to enjoy continued robust growth driven by strong investment in infrastructure and productive capacity and by rising inflows of foreign direct investment (FDI) and other financing opportunities.

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<sup>3</sup> As evidenced in Annex 6: Economic Analysis. See Figure 5.

## **B. Sectoral and Institutional Context**

11. Skills constraints in all sectors of the economy are largely the product of insufficient education and training and/or low quality of education and training in Mali. Between 2004 and 2010, Mali made significant progress in basic education, increasing the primary gross enrollment rate (GER) from 72 in to 82 percent, primarily through reforms initiated to fulfill the Millennium Development Goals (MDGs) agenda. Access to secondary and tertiary education also increased from 12 to 34 percent and from 4 to 5 percent, respectively, over the same period. Further progress was hampered by the negative effects of the crisis for all social sectors. In primary education, the GER declined to 69 percent in 2013, while the primary completion rate decreased from 58 percent in 2010 to 48 percent in 2013. Equity in access to secondary and tertiary education remains a challenge, with the upper income quintiles of the population currently being the largest beneficiaries of secondary and tertiary education.

12. Of greater concern is the low quality and relevance of education throughout the system. This was demonstrated by the results of a 2011 national student assessment which found that less than 20 percent of students who had completed six grades of primary school had the requisite skills. The assessment also highlighted poor labor market outcomes for upper secondary and post-secondary education graduates, among whom unemployment rates were close to 30 percent. Moreover, Investment Climate Assessments and Surveys (ICAs) have consistently found that formal sector employers are unable to recruit workers with the appropriate mix of skills, further buttressing the view of a mismatch between education and training outcomes and the needs of the formal sector and the economy at large.

13. These challenges are, in large part, the consequence of poor teaching practices, and inadequate learning environments. This is in turn symptomatic of pervasive inefficiencies in the utilization of resources and broader governance gaps in the education and training sector. A 2014 Report on the Future of Higher Education in Mali, found that these challenges are particularly acute in the tertiary education sub-sector. This has led to the failure of the sub-sector to fulfill its role as a source of high level skills, with negative knock-on effects that limit the potential for economic diversification, improved productivity and growth. The study found that only 53 percent of 25-34 year-old workers with a tertiary education are currently employed, due to low levels of knowledge and poor skills. The share of science and engineering students as a proportion of tertiary enrolment was only 3.8 percent in 2011, the lowest among 60 countries surveyed in Sub-Saharan Africa (SSA), Middle East and North Africa, East Asia Pacific, South Asia, and Latin America and the Caribbean. Despite the important contribution of the agricultural sector to GDP, Mali ranked 11<sup>th</sup> lowest for enrollment in tertiary qualifications pertaining to agriculture. In contrast, at almost 80 percent, Mali ranks highest in the share of students enrolled in humanities and social sciences programs. Demographic trends are creating a significant increase in demand for higher education: the higher education; system should prepare for this by taking immediate measures to enhance its efficiency and increase the likelihood of youth employment.

14. In order to strengthen and to fully unlock its potential for change, the higher education system faces many challenges which are interconnected and require urgent action for immediate results. These key challenges are discussed in greater detail in Annex 8.



**15. The tertiary education system lacks sufficient institutional diversity, and a mix of program and degree specialization.** Five public universities (four in Bamako and one in Segou – University of Segou (UOS)) and four technical institutes and *grandes écoles*, account for more than 95 percent of total enrollment at the tertiary level with the overwhelming majority of students concentrated in Bamako. More than two-thirds of enrollment is concentrated in the Law and Humanities faculties. There are insufficient opportunities for aspiring graduates to obtain technical and professional qualifications in a short period of time. Increasing the breadth and scope of programs and degree offerings, with a particular focus on Science and Technology (S&T) qualifications, while concurrently encouraging the expansion and capacitation of private higher education institutions (HEIs), will enable the higher and tertiary education sub-sector to more effectively respond to challenges related to relevance and quality, and more effectively meet the needs of the economy.

**16. The tertiary education system's institutional and program licensing process constrains quality and relevance of courses.** The HEI accreditation process, which uses external resources such as the African Higher Education Council (*Conseil Africain et Malgache de l'Enseignement Supérieur – CAMES*) to deliver accreditation of institutions which are valid for few years and renewable, is essentially not utilized. Program licensing is ruled by a 2006 Decree, which creates an independent national body – *comité d'habilitation* – under the coordination of the National Directorate of Higher Education and Scientific Research (*Direction Nationale de l'Enseignement Supérieur et de la Recherche Scientifique-DNESRS*). The *comité d'habilitation* members are appointed by a ministerial decree signed by the Minister of Higher Education which analyzes the information provided by the requesting HEI and makes a recommendation to the Minister. This program needs to be revamped.

**17. Pedagogical inputs and innovation are limited.** There is inadequate emphasis on pedagogical inputs such as books and scientific documentation, information and computer technology (ICT), laboratory equipment and supplies, research activities, staff recruitment and development, and investment in infrastructure. The situation is compounded by uncontrolled admissions which, adding to the high repetition rates during the two first years of higher education, results in the overcrowding of some universities. The student-teacher ratio is on average very high. To date, there is no comprehensive staff development plan to meet the present and future teaching needs and quality requirements. A better allocation of resources and enhanced institutional diversification would enable HEIs to improve the teacher-student ratio to reasonable levels and acquire pedagogical inputs so as to increase internal and external efficiency and improve the country's public financing of higher education. Additionally, training faculty and post-graduate students to become qualified teachers while building partnerships with international HEIs such as those participating in the African Centers of Excellence (ACE)<sup>4</sup> Project would support the introduction of greater innovation and enhance pedagogical inputs.

**18. The higher education sector is undermined by systemic and institutional gaps in governance.** Poor supply and low quality pedagogical inputs are symptomatic of poor resource utilization. The bulk of the sector's budget is allocated to students' welfare and extra teaching hours. The scholarship system, for instance, accounted for 56 percent (FCFA18.5 billion,

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<sup>4</sup>The African Centers of Excellence Project (ACE) is a World Bank funded project (US\$100 million) approved on April 15, 2014, which includes Benin, Burkina Faso, Cameroon, Ghana, The Gambia, Nigeria, Senegal, and Togo.

equivalent to US\$40 million) of the total higher education budget in 2013. In addition, supplement paid for additional teaching hours accounted for more than FCFA2 billion (US\$4.2 million) in 2013. Improving the structure of financing for higher education will enable HEIs to more efficiently allocate their own budgets in support of improved pedagogical inputs and innovation. Moreover, the sector is negatively impacted by an absence of performance standards for HEIs, low levels of accountability for results, and limited institutional autonomy although reforms to rectify this are currently underway. Recruitment of teaching staff is organized by the Ministry of Civil Service and the MoHE determines the academic schedule and admissions criteria for students without taking into account availability of teaching staff and resource limitations. This situation has resulted in recurrent and long-lasting teacher and student strikes, reducing substantially the academic year and negatively affecting learning outcomes. Improving institutional autonomy while increasing accountability will enable HEIs to professionalize their management and create the conditions for the introduction of alternative sources of revenue (including, for example, introducing student fees). The higher education sub-sector system also suffers from the absence of a comprehensive regulatory and financing framework to support the development of private HEIs and university-industry linkages. Despite the existence of an accreditation system for private HEIs, there are no incentives or regulations in place to allow private HEIs to access land or financing (private or public). Improving incentives for the participation of private HEIs will help Mali to diversify its program offerings.

19. **Government Efforts to Reform Higher Education.** Between 2002 and 2013, the Government of Mali (GoM) developed and implemented a comprehensive ten-year program (*Programme décennal de l'éducation – PRODEC*) aimed at addressing bottlenecks in the education sector while concurrently laying the foundation for sector-wide improvements in quality. Drawing on lessons from the implementation of PRODEC, an Interim Program was introduced for the period 2014-2016. A full sector review will be developed in 2015-2016 and will be utilized to develop a ten-year new sector program.

20. The 2014 Forum on the future of higher education (supported by Economic Community of West African States - ECOWAS), in addition to discussing the status of the education sector, sought to forge a consensus on the reforms required for the improved functioning of the sector.<sup>5</sup> Participants in both the 2014 forum and the 2008 National Forum on Education (NFE) recognized the negative impact of recurrent strikes and poor governance on the quality of education provision, and highlighted the need for systemic change. The GoM prepared, as a follow up to the 2008 NFE recommendations, a National Policy on Higher Education and Scientific Research.<sup>6</sup> The policy which incorporates the recognition of these underlying challenges was approved in 2010, but is yet to be translated into an action plan for implementation.

21. **Other Partners and World Bank Group Projects.** In 2011, the Government of Mali requested support from the World Bank to assess higher education institutions and develop a program to reform the sub-sector. A project was developed and was at its appraisal stage when the coup d'état occurred in March 2012 and a de-facto government was put in place which led to the suspension of aid as well as project preparation. Within the process of project preparation, a

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<sup>5</sup> *Forum national sur l'avenir de l'enseignement supérieur au Mali.*

<sup>6</sup> *Document de Politique Nationale de l'enseignement supérieur et de la recherche scientifique (Avril 2010)*

study on HEIs governance was conducted, which concluded that the sub-sector and its institutions needed more autonomy and greater accountability to efficiently use allocated resources, and to expand resources mobilization through adequate responses to emerging needs. To support the government in developing a response, a legal framework and regulatory tools were developed and discussed among stakeholders, but it remains to be approved.

22. The World Bank is currently providing support to the education sector through two operations: (i) The Emergency Education for All (EFA) Project in the amount of US\$41.7 million funded by the Global Partnership for Education (GPE) which aims to increase access and improve the learning environment for affected students due to the country's recent crisis; and (ii) the Skills Development and Youth Employment Project funded by IDA in the amount of US\$63 million, which focuses on supporting education and training programs for youth employability and private sector led job opportunities in Mali targeting basic and intermediate skills in economic sectors such as fruits and vegetables, animal products (meat, milk, and skin products), construction, mining and auxiliary services, artisanal programs and ICT.

23. As further detailed in Annex 8, a number of partners are active in the sector. The intervention includes, the implementation of the five year Netherlands Post-Secondary Education Capacity Building Project (NICHE) to the amount of Euro 3 million, for the period 2014-2018 which aims to improve the governance of HEIs and diversify in-service training opportunities. Canadian Cooperation, in partnership with The University of Laval, is in the process of designing a project aimed at improving resilience to food insecurity.

24. The proposed Higher Education Support Project (HESP) will support the development of high and intermediate level skilled workers required to enhance critical value-chains in agriculture, livestock, and mining and auxiliary services, thus contributing to the promotion of the diversification of the Malian economy, and improvements in productivity and employment creation. HESP will complement and strengthen Bank-funded national and regional projects in agriculture, livestock management, mining, skills development, electricity and communication, by supporting high level training programs in agribusiness and livestock, construction, communication, and engineering. Relevant IDA-funded projects (on-going or under preparation) include: the Agricultural Competitiveness and Diversification Project (*Programme de Compétitivité et de Diversification Agricole - PCDA*), the Agricultural Productivity Enhancement Project (*Projet d'Accroissement de la Productivité Agricole-PAPAM*); the Domestic Electrification and Access to Social Services Project (*Projet d'Electrification Domestique et Accès aux Services Sociaux de Base - PEDASB*), the Agricultural Productivity Enhancement Regional Project (*Projet Régional d'Amélioration de la Productivité Agricole – WAAPP*), the Sahel Telecommunication Project (*Projet de Télécommunication dans le Sahel – WARSHIP*), and the Sahel Pastoralism Support Regional Project (*Projet Régional d'Appui au Pastoralisme dans le Sahel*).

25. The HESP will take advantage of the ongoing ACE Project to build synergies and foster more collaboration in key areas identified by HEIs in Mali including, among others: teacher training, curriculum design and implementation and research.

### **Relationship to ISN/SCD**

26. The proposed project fits within the existing interim strategy note (ISN) and Systemic Country Diagnostic (SCD) (which is currently under preparation), although it was not formally included in the ISN. The Mali ISN, approved in May 2013, focuses on: (i) laying the foundations for long-term accountability and stability; (ii) protecting human capital and building resilience to shocks; and (iii) preparing the conditions for economic recovery through private sector-led growth by addressing key constraints. It would also require tackling governance issues for efficient use of public resources, and developing the capacity to upgrade managerial and technical skills toward a more competitive economy. The ISN focus is in line with the Bank's twin goals of promoting shared prosperity and reducing extreme poverty. The SCD under preparation focuses on opportunities and binding constraints to reducing poverty in Mali. With a focus on rural areas where most of the poor live, the SCD highlights major constraints to agricultural production and distribution related to lack of key skills and resources, weak supply chains and access to markets, among others. A more effective and relevant higher education system could help address these issues by further strengthening, among others, high level technical skills needed to support agricultural productivity, processing and transformation and entrepreneurial and business skills for growing and diversifying agricultural businesses. This could also be addressed by supporting technical innovations in areas such as seed development and irrigation to increase agricultural production and labor productivity. Beyond the next stage of economic diversification, this would have an immediate impact on jobs and/or earnings in rural areas contributing in the short-term to an increase in shared prosperity and a reduction in poverty.

### **C. Higher Level Objectives to which the Project Contributes**

27. The HESP is expected to contribute to the achievement of transformational growth through economic diversification by increasing the ability of the tertiary education sector to supply high-quality graduates with skills matched to the needs of labor market, especially in the fields of science, technology, and engineering. The project aims to: address the poor supply and quality of skilled labor limiting growth opportunities in areas that require high levels of technical expertise and education (for example, mining, agro-industry, livestock management and ICT); and reduce the country's relative isolation through expanded opportunities for collaboration with foreign firms potentially interested in investing in Mali. By addressing skills-related constraints in agriculture, livestock, agro-industry and mining (in predominantly rural activities) the project aims to positively impact labor productivity and enhance the incomes of the poor, with positive implications for poverty reduction more generally. The project will also contribute to narrowing the gender gap in tertiary education, which will also contribute to enhancing shared prosperity.

## **II. PROJECT DEVELOPMENT OBJECTIVES**

### **PDO**

28. The development objective of the proposed Mali Higher Education Support Project (HESP) is to improve the relevance of selected higher education programs and the stewardship of the higher education system in Mali.

## **Project Beneficiaries**

29. The project will support activities aimed at improving the governance of HEIs and the overall system, and the development of new programs aligned with labor market demands, increasing the likelihood that graduates will be able to obtain good jobs. In this respect, it is expected that the project will directly benefit about 35, 000 students of the selected HEIs and other HEIs benefitting from the project’s interventions. The project is also expected to benefit more than 1,000 academic staff and administrators who will benefit from upgraded and capacitated work environments, and improved skills and experience, which will make them more competitive in the sub-region’s labor market.

## **PDO Level Results Indicators**

30. The Project will use five key performance indicators (KPIs) and core KPI to assess the progress toward the PDO. More details can be found in Annex 1.A. The six PDO-level results indicators are:

### Core Indicator:

- 1) Direct beneficiaries (number) of which female project beneficiaries (as percentage) (Core Indicator);

### Relevance:

- 2) Number of programs in participating HEIs that are proposed and developed with private sector participation<sup>7</sup>;
- 3) Tracer studies (for graduates from the selected HEIs) conducted; and
- 4) Employer satisfaction rate (in the three priority sectors).

### Stewardship:

- 5) Number of institutional development (IDPs) plans approved at public HEIs; and
- 6) Number of public HEIs with a functional<sup>8</sup> *Conseil d’Administration or Conseil d’Université* (CA) (Board of Trustees).

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<sup>7</sup> These programs, defined as “Licensed programs”, refer to programs approved by the Licensing Commission or Quality Assurance (QA) unit of the MoHE following a request of habilitation by the HEI. They have to be previously approved by the Board of Trustees of the HEI based on the *Conseil de Perfectionnement* (CP) recommendation which comprises 50 percent of members of the private sector specialized in the area of the program. The licensing process will be strengthened under Component 2 of the Project. Licensed programs include both existing programs to be newly licensed and new programs.

<sup>8</sup> A functional Board of Trustees is defined as having at least 30 percent of non-civil servants from sectors relevant to programs developed at the HEI, which meets at least twice a year to deliberate on the institution key aspects, such as but not limited to the budget, appointment of key staff, as well as the rules and regulations of the institution.

### III. PROJECT DESCRIPTION

#### A. Project Components

31. The proposed project will support the Government's ongoing and planned higher education reforms to enhance the capacity of HEIs in Mali to produce high quality graduates with skills aligned to labor market needs. The HESP will do so by improving the governance framework for higher education, while concurrently supporting direct improvements in selected programs and institutions. The project will achieve the governance objective through a pragmatic approach, supporting ongoing institutional reforms aimed at conferring more autonomy to HEIs while strengthening the planning, oversight, and information management of the Ministry of Higher Education and Scientific Research (MoHE) (autonomy with accountability). This approach will be implemented in a two-pronged fashion. On the one hand it will entail supporting stronger stewardship of the MoHE through strengthened quality assurance (QA), monitoring and evaluation (M&E) and the coordination functions of systems and bodies. On the other hand, it will entail supporting the implementation of measures to improve governance in selected institutions premised on best practices with the potential for replication and scaling up in other institutions.

32. By contributing to the progressive improvement of the sector's governance framework, the project aims to improve the relevance of programs through direct support to the implementation of a set of new (or upgraded) labor market-oriented academic programs and the introduction of innovative financing mechanisms (performance-based financing - PBF) through Disbursement Linked Indicators (DLIs) linked to results. The DLI approach (further illustrated below) is expected to be an important contributor towards the establishment of a more efficient financing structure for the sector.

33. In sum, the Project will: (i) support the development and implementation of labor market oriented programs in selected HEIs through quality enhancing measures and better governance of the HEIs (including management and financing); and (ii) strengthen the capacity of the higher education system to better plan and implement higher education reforms, monitor the quality and relevance of programs, provide relevant data for policy decisions and coordinate the system's key stakeholders. The project will undertake these activities through three components: Component 1: Support to Selected Public HEIs; Component 2: Higher Education System Support; and Component 3: Project Management and Technical Assistance. These three components will be implemented using a two-pronged disbursement mechanism: DLIs<sup>9</sup> for sub-Component 1.1 to support the implementation of performance contracts with HEIs and to directly support the implementation of activities aimed at improving governance, quality, and relevance of programs. Traditional expense-based disbursement, will be used for Sub-components 1.2 and 1.3 as well as for Components 2 and 3.

#### **Component 1: Support to Selected Public HEIs (US\$22 million)**

34. This component will improve the relevance of selected higher education programs, while also contributing to improving stewardship, by supporting governance improvements and quality related interventions in selected existing HEIs with strong commitment to reform and supporting

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<sup>9</sup> See Annex 1.B: DLIs and Results.

a new institution offering programs in agriculture, livestock, mining and technology. It is composed of three sub-components: Component 1.1: Support to selected existing public HEIs; Component 1.2: Support to the University of Segou's new livestock and animal health department; and Component 1.3: Support to the development of the new Bamako Africa School of Mines.

35. ***Sub-Component 1.1: Support to selected existing public HEIs (US\$16 million)***. This sub-component will support, at most, four selected existing institutions, namely<sup>10</sup>: The Institute Polytechnic Rural of Katibougou (*Institut Polytechnique Rural de Katibougou-IPRK*) focusing on agriculture, research and outreach; the University of Segou (*Université de Ségou-UOS*) focusing on livestock, and agriculture programs with a component on water management and irrigation; the University of Science and Technology (*Université des Sciences, Techniques et Technologies de Bamako-USTTB*) providing training in applied sciences to support other sectors; and the National School of Engineering (*Ecole Nationale d'Ingénieurs-ENI*) dealing with engineering programs including mining.

36. These four HEIs were selected based on the availability of programs in targeted economic sectors which contribute to close to 40 percent of the country's GDP and employ nearly 75 percent of the country's workforce. Three of these HEIs are recognized as leaders in their fields while the fourth one, UOS, which will be first public regional university in the country, is still under development, but with strong potential given its strategic location in the *Office du Niger*, an important agricultural and livestock zone. These HEIs have also demonstrated their willingness to undertake important reforms through their commitment to key governance related actions (detailed in Annex 2) which have all been implemented, although they are still under review by the Bank team.

37. The project will support the implementation of each of the selected HEI's five-year (2015-2020) Institutional Development Plans (IDPs) and Annual Work Plans (AWPs) to be approved by each HEI's Board of Trustees (*Conseil d'Administration – CA*) prior to project effectiveness. The AWP will serve as a basis for contracts to be signed by the rector of the HEI, the Minister of Higher Education and the Minister of the MoEF, outlining agreed upon annual objectives and indicators for each HEI. The AWP will include all activities and funds (including government and external funds allocated to the institution), with clear roles and responsibilities, and mechanisms for M&E to assess the HEI's yearly performance. The annual report on the AWP and annual audit report will be used to complement the report of the Quality Assurance (QA) unit on HEI performance, which in turn will be used for the monitoring of DLI.

38. The implementation of IDPs is expected to improve the quality and relevance of HEIs and their programs, through the upgrading of existing programs and the introduction of new licensed programs, while concurrently fostering the development of a diversified, dynamic, and more responsive higher education system. To further support and enhance good institutional governance and program relevance, the project will incentivize the achievement of institutional objectives by disbursing according to selected DLIs in the IDPs. Two DLIs with seven Disbursement Linked Results (DLRs), related to governance, relevance and quality dimensions, with relevant targets for each selected HEI have been identified and are reported in Annexes 1.C, and 1.D, respectively. Annex 4 includes a detailed protocol for monitoring DLIs and DLRs. The project will disburse against expenditure line items related to salaries and additional teaching

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<sup>10</sup> Detailed data on the selected HEIs are provided in Annex 5.

hours up to an aggregated amount not exceeding the total the annual amount indicated for the DLIs of each HEI.

39. To take into account the different need of the HEIs, including by the overall number of students and qualified teachers and the needs for new and/or upgraded equipment, the annual amounts vary across institutions from US\$500,000 annually for the already quite well endowed IPRK to US\$1,100,000 annually for USTTB (with a much larger pool of students and limited teaching staff) and UOS (under development). In all cases, these amounts represent a significant share of the current recurrent budgets of these institutions (from about 30 percent to 60 percent which should contribute to the financing of a significant share of their IDPs, including notably very much needed recruitment of fixed-term teachers, teacher training activities, lab equipment and pedagogical materials.

40. The achievement of the specific DLR targets will be confirmed on the basis of the DLIs and results monitoring protocol which is defined and agreed upon with each participating HEI and the MoHE. Except for salaries and payment of additional teaching hours, the project will not be monitoring any other expenditure, but the achievement of agreed results. To achieve the DLIs the HEIs will have to fulfill the agreed governance indicators and successfully implement their IDPs. In cases where HEIs are not able to achieve the agreed results, and therefore are not in a position to be fully funded as per the maximum amount set for DLIs, remaining funds will be either re-allocated among the remaining institutions or allocated to other HEIs implementing reforms and developing programs in line with established criteria. For DLR 4-7 under DLI 2 to be considered for any payment, the result has to be achieved at a level of at least 50 percent of the target for the year.

41. **Key activities:** This sub-component will support the activities included in the approved IDP and its AWP. These activities have to be focused on achieving the HEI's development objectives of improving the quality and relevance of programs, and the governance and management of the institution. The IDP could include, for instance, provision of books and scientific documentation, ICT, laboratory equipment and supplies, research activities, staff recruitment and development, and investment in infrastructures. Finally, additional capacity building to the HEIs and the Project Implementation Unit (PIU) in institutional plan development and QA will be supported through Components 2 and 3.

42. **Beneficiaries:** support under Component 1 will benefit students enrolled in the four HEIs as well as teachers and technical support staff. Approximate numbers are: 20,000 students (new and already enrolled) and 1,000 teachers and technical support staff.

43. **Implementation arrangements:** the sub-component will be coordinated by the PIU under the coordination of the head of Component 1 who is a civil servant from the Quality Assurance Unit (QA Unit) under the DNESRS. Each HEI will execute its institutional development plan and thus have its own fiduciary responsibilities. Contracts will be signed by the rector of the HEI, the Minister of Higher Education and Minister of Economy and Finance defining the agreed objectives and indicators each HEI would commit to achieve for the year. Under the leadership of the PIU coordinator and the Head of the DNESRS, the head of Component 1 will serve as a liaison between HEIs and Quality Assurance unit. The implementation arrangements of this component and the project, in general, are meant to strengthen both the system and HEIs. To carry out the annual evaluation of DLIs, the PIU will hire a consultant to support the QA unit in producing the DLIs and results assessment reports.



44. **Sub-Component 1.2: Support to the University of Segou's livestock department (US\$4 million).** Unlike the three other HEIs due to benefit from the HESP (which are already established and have facilities that will require upgrading), the UOS, the first public regional university in Mali, is still in the process of development and will require greater support for the delivery of programs. Specifically, this sub-component will support the development of a new livestock and animal health department at UOS through the construction and equipping of new teaching facilities on existing land owned by the university.

45. **Activities:** under this sub-component the project will finance civil works, equipment, goods and TA required to set up a modern functional facility.

46. **Beneficiaries:** this sub-component will benefit the current and potential new students of UOS, as well as spur the development of the *Office du Niger* as an agriculture and livestock development pole.

47. **Implementation arrangements:** this sub-component will be coordinated by the PIU under the coordination of the head of Component 1. All fiduciary responsibilities will be with the PIU. The project will directly contract with the ENI and the *Ecole Supérieure Internationale d'Architecture et d'Urbanisme* (ESIAU), a private higher education school which has been awarded an international architecture prize, to conduct the design of the new animal health department in UOS, and for the oversight of the civil works.

48. **Sub-Component 1.3: Support to the development of the new Bamako Africa School of Mines (US\$2 million).** The government has legally established a new Bamako -Africa School of Mines to more effectively address the intermediate and higher skills gaps inhibiting the further development of the country's mining sector, and is exploring opportunities for the participation of the private sector in the establishment of the school. Some mining companies operating in Mali have already shown interest in this regard, with Randgold allocating US\$1 million towards the purchase of land for the school and the financing of consultation processes. Towards these ends, the government has requested Bank support to develop a business model for the new school incorporating a Public Private Partnership (PPP) framework. Following the development of this framework, the GoM and the Bank will assess the development process, phases for the establishment of the school, and financing options (including PPPs, other international partners, and, if needed, additional financing). Further steps will be defined following the completion of these studies in coordination with the Ministry of Mines.

49. **Activities:** through this sub-component, the Project will support the feasibility study, architectural plans, curriculum and program development and equipment specifications for the new proposed school.

50. **Implementation arrangements:** under the leadership of the PIU coordinator, the Ministry of Mines will appoint a representative who will be in charge of activities under the sub-component. A sub-account will be opened to distribute funds for this sub-component, which will be operated jointly by the project coordinator and the staff appointed by the Ministry of Mines, to ensure satisfactory use of Bank procedures and also proper use of funds in line with agreed activities. The representative of the Ministry of Mines will be part of the PIU and the Project Technical Committee (PTC) and will participate in technical meetings. Fiduciary aspects will be under the responsibility of the PIU.

## **Component 2: Higher Education System Support (US\$8 million)**

51. This component aims to improve the stewardship of the higher education system in Mali by strengthening the Government's capacity to: (i) articulate and implement reforms; (ii) play an overall oversight and regulatory role, including for the private sector; and (iii) manage information. This component will support implementation of the MoHE reform package and its Operational Plan, including contingent laws and decrees, to ensure that: (a) the roles and responsibilities of the MoHE are focused and capacitated for policy formulation, QA, M&E, and the promotion of improved performance in HEIs; and (b) universities and other tertiary institutions are empowered with greater autonomy with regard to student admissions, teacher recruitment and budget management.

52. In order to improve the MoHE's oversight and regulatory capacity, and the capacity of the Ministry to implement reforms and assist HEIs, particular emphasis will be placed on improving weak QA and planning capacity within the MoHE (as documented in the sector diagnostic). Improving the capacity of the Ministry for effective planning will require support for the production of statistics and studies, including tracer studies to be conducted during the first, third and fifth years of project implementation. These studies will monitor the employment status of graduates from licensed programs, and employer satisfaction with recruited graduates. Moreover, the capacity of the MoHE to assist HEIs (both public and private) in the development and monitoring of five-year business plans, and in the preparation of the medium-term Higher Education Sector Plan will also require further strengthening.

53. Enhancing QA will be achieved through the effective implementation of the Bachelor-Masters-Doctorate (*License-Masters-Doctorat-LMD*) system, and regular review of HEI's IDPs, with a particular focus on HEIs supported by the project. The current licensing process will be strengthened through the accreditation of programs by the new semi-autonomous QA unit.

54. The project will also support investments in a system-wide ICT network to fill gaps in existing support, and provide funds to connect the country's tertiary education system to the West and Central African Research and Education Network (WACREN) to maximize benefits associated with services provided under the leadership of the Association of African Universities (AAU).<sup>11</sup> Critical for the effective implementation of the ICT network will be the development of capacity to manage and service the system, and training for members of the university community to make the best use of the resources. The component will support the implementation of the higher education sector information system (SIGES). Technical management of activities related to the establishment of the Management and Information System (MIS), the virtual library, online courses, and all other activities that require ICT infrastructure will be aggregated within the newly established IT Management Center (*Centre de Ressources Informatiques*) to serve as a shared resource for the entire system, including public and private HEIs.

55. Finally, this component of the project will support several studies on the development of the private sector, including innovative ways for developing and expanding the capacity of private HEIs (in terms of quantity, quality and relevance) in complementarity with the public sector. This activity will be supported through an IDA-International Finance Corporation (IFC) collaboration which will explore financing alternatives with local banks. In particular, the

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<sup>11</sup> WACREN is part of the National Research and Education Networks (NREN) which aim is to facilitate knowledge sharing and to enhance data collection.

feasibility of two innovative financing alternatives will be examined: a private sector student loan scheme that could financially support low and middle-income students attend private institutions, and/or a financing facility to facilitate private institutions to expand their student population and infrastructure to new geographical areas or disciplines. This study could provide the framework and basis for a pilot.

56. **Key activities:** The following main activities (further detailed in Annex 2) will be supported by the project: (a) upgrading of the *Direction Nationale de l'Enseignement Supérieur et de la Recherche Scientifique* (DNESRS); (b) support to the Planning and Prospective Unit (PPU) and the development of the sub-sector plan; (c) support to the QA Unit; (d) MIS, with the following activities financed in relation to the SIGES and as an integral part of the WACREN: (i) design of the SIGES; (ii) Implementation of the SIGES at institutional level; and (iii) implementation of the SIGES at the central level; (e) a virtual library and upgrading libraries; and (f) development of Private Sector Providers.

57. **Beneficiaries:** While Component 1 is focused on selected HEIs; Component 2 will support broader initiatives benefitting the central level and all HEIs (public and private).

58. **Implementation arrangements:** under the leadership of the PIU coordinator and the head of the DNESRS, the coordinator of Component 2 will monitor and facilitate the daily implementation of activities under this component, with the head of the private HEIs within the ministry playing a leading role in monitoring activities related to the private sector. All activities will be managed by the PIU as far as fiduciary processes and reporting are concerned. The project will directly contract with the ENI and the ENA, to conduct the design of the new DNESRS as for the new animal health faculty in UOS for the oversight of civil works.

### **Component 3: Project Management and Technical Assistance (US\$3.0 million)**

59. Component 3 will fund activities with project management, and associated TA, with regard to fiduciary issues, as well as studies and analytical work. The project will finance studies contributing to the improvement of M&E in the higher education sector as well the design of a new sector plan integrating a financing system that incentivizes a more competitive higher education system. Financed studies will include: background studies towards the development of the sector program (financed under Component 2); annual higher education reports; a study of potential financing mechanisms; and an assessment of the implementation of new programs, including those developed with the support of ECOWAS.

60. Component 3 will, moreover, finance exchange programs for representatives of public HEIs with internationally-renowned institutions of higher learning, visiting teaching missions from the Malian diaspora, and innovation to promote learning outcomes, academic excellence and responsiveness to market demand. Particular attention will be placed on the procurement of international TA to assist selected HEIs to develop best practices in their business plans. The TA sub-component will finance the provision of higher education services to institutions not supported in Component 1 from the emerging African Centers of Excellence in West and Central Africa. These Centers of Excellence, focused on science, technology, engineering, mathematics, health and agricultural sciences are beneficiaries of a Bank-supported regional project. Malian institutions will define their needs and competitively purchase support packages that may include short-term specialized training, longer-term faculty development, the sponsoring of visiting faculty, and curriculum design and development.

61. The PIU will be responsible for the daily management, implementation, administration, project coordination, and M&E of the project.

## B. Project Financing

62. **The project uses an Investment Project Financing (IPF) with two modalities.** While an IPF is the right instrument to address both at HEIs level and at the system level FM capacities, the project will use two disbursement modalities: (i) DLIs for Component 1; and (ii) items-based disbursement for activities under Components 2 and 3. This mixed approach is relevant to address challenges at HEIs level and demonstrate that improvements could occur using an incentive/reward-based approach. DLIs financing modality will leverage HEIs capacity to be responsive to labor market demand and to develop relevant programs. The items-based financing modality is the appropriate mechanism for Components 2 and 3 to address fiduciary management capacity, since this project is the first of its kind in the Mali higher education subsector, where the MoHE does not have experience in implementing large donor-funded projects. An IPF is suitable for building the Government’s financial and procurement capacities and information systems to efficiently use resources.

**Table 1: Project Cost and Financing**

<b>Project Components</b>	<b>Project cost (US\$ million)</b>	<b>IDA Financing (US\$ million)</b>	<b>Percentage Financing</b>
1. Component 1: Support to Selected Public HEIs	22.0	22.0	100.0
2. Component 2: Higher Education System Support	8.0	8.0	100.0
3. Component 3: Project Management and Technical Assistance	3.0	3.0	100.0
<b>Total Costs</b>	33.0	33.0	100.0
Total Project Costs	33.0	33.0	100.0
Front-End Fees	0	0	0
<b>Total Financing Required</b>	33.0	33.0	100.0

## C. Lessons Learned and Reflected in the Project Design

63. Lessons learned from previous Bank operations in Mali and other higher education projects in the region have been incorporated into the project design. The conclusions of the recent World Bank report “The Road to Academic Excellence” highlight institutional autonomy as an enabling factor underpinning greater flexibility, adaptation and improved management of high quality staff and student recruitment, and FM. In a fast changing economic environment, HEIs must be capacitated with the necessary organizational, managerial and financial autonomy to effectively anticipate and respond to the evolving demands of the economy. Moreover, structured incentives can be very useful in encouraging links between HEI’s and the private sector, and to inculcate accountability for results. Funding of HEIs linked to DLIs will enable the introduction of new mechanisms promoting the autonomy of institutions, their flexibility, and accountability for results. The proposed project will build the capacity of the higher education system to support

change in individual HEIs, drawing on lessons learned through this process to make the case for and support broader systemic reform. International evidence moreover suggests that institutional autonomy needs to be complemented by improvements in system-wide management to achieve an optimal balance between autonomy and accountability. In this regard, the project aims to strengthen the M&E and management capacities of the GoM to steer systemic improvement.

64. Lessons learned from previous operations will be implemented to buttress the sustainability of project interventions. As a corollary to strategic autonomy, financial autonomy must be ensured. The project will support HEIs to develop and diversify sources of income, for example, through professional development programs (short courses) and consulting work. As demonstrated through the ACE intervention, the development of partnerships and linkages between HEIs and the private sector can play an important role in ensuring the durability of interventions. The project will encourage the active participation of private sector representatives in ensuring the application of good practices to bolster reform, and to inform the content of reforms relating to governance and curricula design. Moreover, greater regional collaboration has the potential to ensure stability through the process of reforms to institutional management and the ministry, while partnerships with Centers of Excellence will encourage the utilization of best practices to reinforce efforts to improve good governance and management.

65. The improvement of institutional capacity to enable a high-performing tertiary education system cannot be achieved in a few years. Government formulation of, and commitment to, a long-term vision for the sector must extend beyond the horizon of any single project. The proposed HESP, which would be the first of its kind in Mali, has selected a limited number of issues (most of them systemic), and will address them at the most appropriate level (system-wide or institutionally) to enable the greatest impact. Building enduring capacity and developing a strategic vision integrating the views of key stakeholders and policymakers is a step by step process requiring the management of collaboration and relevant tool development.

66. Project design also takes into account specific lessons learned from previous education projects implemented in Mali. In this regard it has been observed that due to generally weak implementation capacity, project effectiveness is improved when TA is available, specifically in the areas of project implementation, procurement, FM and M&E. The project will finance TA activities in this regard.

## IV. IMPLEMENTATION

### A. Institutional and Implementation Arrangements

67. The MoHE is the project implementing agency. It will have overall responsibility and accountability for project coordination and implementation.

#### *Project administration mechanisms*

68. ***The Council of Cabinet (Conseil de Cabinet) of the MoHE will serve as the Project Steering Committee (PSC):*** The project will be aligned within the Council of Cabinet of the MoHE to ensure complementarity with existing programs, coherence with the National Policy on Tertiary Education (*Politique Nationale de l'enseignement supérieur*) and alignment with the Government's priorities for the sub-sector. The PSC is the primary decision-making body for the project. Its main role will be to provide guidance and overall supervision of the project, and to

facilitate implementation through the identification and elimination of obstacles to implementation. The PSC is chaired by the Minister of Higher Education or his/her designee, and it comprises all Rectors and Directors of the *Grandes Ecoles*, and Directors of the central units of the MoHE, including the Director General in charge of Higher Education, and the Secretary General of the MoHE. The PSC will meet twice a year (in June and December) to review and approve the annual work plans, budgets, monitoring reports and studies prepared under the project, propose solutions for problems that may arise, and decide on the project's strategic direction. The project coordinator will represent the project and will be part of the Council of Cabinet to which it will report every three months and seek guidance when necessary.

69. **The Project Technical Committee (PTC)** will be chaired by the National Directorate of Higher Education and Scientific Research (*Direction Nationale de l'Enseignement Supérieur et de la Recherche Scientifique* – DNESRS). The PTC will meet bi-monthly to review the annual work plan, monitor problems and provide solutions. The PTC will include the project coordinator, heads of the planning, QA, and private sector units, the project's technical coordinators and other members of the PIU, including the representative of the Ministry of Mines. As the need arises, other staff of HEIs or units outside the MoHE will be invited for specific meetings.

70. **Implementation agency.** The project implementing agency, located in the MoHE, will have overall responsibility for project coordination and implementation. The Ministry has appointed a project coordinator and other key members of the PIU who are civil servants from key units of the Ministry. The PIU will consist of a project coordinator, an accountant, a finance officer, a procurement specialist and a procurement officer, a communications officer, coordinator of Component 1 who is from the QA unit of the MoHE, coordinator of Component 2, and an M&E specialist, both from the planning unit, to facilitate the implementation of specific sub-components and major project activities, and in addition, the project will finance the top-up bonus for the technical coordinator of the Resource Center which hosts the database and the ICT infrastructure of the sub-sector. The accounting and procurement staff are from the Direction of Financial Services (*Direction des affaires financières* – DAF) of the MoHE to which they will return after the project. Thus the project will build the capacity of the DAF in project management, procurement and FM. The PIU is responsible for procurement and project FM, preparing annual work plans, quarterly and annual implementation and results reports, monitoring overall project implementation and ensuring compliance with safeguard policies. The project funds will pay part of the PIU civil servants' top-up bonus to be linked to staff performance to be assessed every six months. The representative appointed by the Minister of Mines will also be part of the PIU as he will manage sub-component 2.3 under the coordination of the coordinator with fiduciary support of the PIU.

71. **Higher Education Institutions (HEIs):** The selected HEIs will have the implementing and fiduciary responsibility for implementing their annual IDPs under the oversight of the QA unit of the DNESRS.

## **B. Results Monitoring and Evaluation**

72. **Results Framework:** A Results Framework (RF) (Annex 1) has been developed in consultation with the GoM, describing the PDO and the intermediate performance indicators that will be used to assess progress towards the achievement of the PDO.

73. *Monitoring and evaluation (M&E) system:* The project will support the development of a computerized MIS that will integrate university subsystems into a national higher education system. The primary outputs will be the production of: (i) an annual statistical yearbook; and (ii) HEIs' IDP progress reports, which will include progress in implementing project activities at the HEI level (such as the introduction of licensed programs and teacher training). The planning unit of the DNEsRS and the NICHE Project will work closely with each of the HEIs to develop templates, train staff in data collection, as well as the validation and analysis of data.

74. *Reporting:* The DNEsRS will be responsible for preparation of the annual statistical report summarizing major trends in the sector. HEIs will produce annual reports on project activities benefiting their institutions in alignment with their respective IDPs and agreed upon DLIs, with specific attention paid to the introduction of new programs, the delivery of teacher training activities, IT updates, and the monitoring and implementation of business plans. The PIU will coordinate all reports and will be responsible for preparing: (i) quarterly project implementation reports; and (ii) a consolidated annual report of project activities and indicators, including a financial report linked to results and indicators to be circulated by March 31 each year. In order to effectively monitor DLI, the PIU will recruit a consultant to support the QA unit to conduct an evaluation and produce an annual report. This process will moreover serve as opportunity for capacity building.

75. *Studies and evaluations:* The DNEsRS will be responsible for carrying out a number of sector studies including, but not limited to, studies of higher education financing, human resources, internal and external efficiency, tracer studies and employer surveys. Of particular importance will be the implementation of a tracer study at three points during the lifespan of the project (a baseline survey will be conducted during the first year of project implementation, followed by two later assessments) to track: (i) youth satisfaction with training at the selected HEIs; and (ii) selected HEI graduates' labor market performance (placement rates and dynamics; employment sector; etc.) An employer survey will also be undertaken at three points during the project (baseline survey to be set up during the first year of project implementation) to track: (i) employers' satisfaction with training programs offered by HEIs and/or the performance of newly hired graduates; and (ii) changes in the demand for skills in different sectors. While the employer survey will include all public and private formal sector employers and concern all HEIs, the project will more specifically monitor employers' opinions in the three priority sectors (agriculture, livestock, and mining) in order to fine-tune interventions. These studies will also inform the development of a comprehensive Higher Education Sector Program and a second phase for investment in the sector. The envisioned sector plan will be used to align HEI's IDPs to further improve quality and efficiency. Additional evaluations will include an assessment of the introduction of the 24 new programs, and teacher training programs.

### **C. Sustainability**

The following factors support the project's sustainability:

76. ***Government renewed commitment to the implementation of reforms and strong financial commitment to the education sector:*** The Government has recently demonstrated renewed commitment to implementing reforms by following through on the 2008 National Forum on Education (NFE) recommendations, as well as the design of new rules and regulations to be adopted by the National Assembly shortly. Also, the government has consistently increased financing to education over the past five years, the sector currently represents 3.6 percent of

GDP. Higher education's share of the education budget has also increased from 30 to 36 percent. The recurrent implications of the project are marginal and sustainable. Detailed sector work will be carried out which will be used in the next phase to improve the sector's financial sustainability.

77. **Public support for the reform program:** Recognizing that public ownership of the reform agenda is critical to its long-term sustainability, an extensive process of consultation with key stakeholders was concluded during project preparation to ensure their buy-in to project activities. Economic stakeholders as well as parents are supportive of efforts aimed at ensuring quality higher education provision and to offset the cost of recruiting foreign skilled workers which constrains the competitiveness of private businesses and job opportunities for national graduates.

78. **Technical Viability:** The design of project activities was supported by international TA, informed by best practices, and considerations regarding capacity constraints.

79. **Financial Sustainability:** Project activities are unlikely to generate significant additional post-project costs, except in the case of IT and equipment maintenance which can be sustained by HEI's own resources. The project includes components to build capacity of the system for budget management, and the promotion of alternative income streams for HEIs, reinforcing the sustainability of the project itself. Strategic planning will include a focus on budget analysis and budget management tools, as well as the improved use of existing resources, infrastructure and human resources. Potential sources of income include the development of short courses and consulting, partnership building with possible financial benefits through equipment, research contracts or patenting. Under Component 2, incremental and collaborative capacity-building of the MoHE is intended to maximize the relevance of interventions and ensure ownership at each stage of implementation.

## V. KEY RISKS AND MITIGATION MEASURES

80. Key risks with the capacity to compromise and undermine project implementation relate to: (i) resistance to change by some stakeholders; (ii) limited absorptive capacity for reforms; and (iii) limited capacity to implement a higher education project such as the HESP which would be the first of its kind in Mali. While the ultimate goal of the project is to introduce systemic change to transform the higher education sector in Mali, the change agenda must recognize that: (a) some reforms have prerequisites; (b) some reforms take longer to prepare than others; and (c) the absorptive capacity for reform is limited and there are many vested interests confronted at once. As explained in Annex 8, the risk related to resistance to change is apparent by an allocation of resources in favor of a scholarship system benefitting only a few; widespread governance issues, including poor admission policies, lack of performance standards for HEIs, and limited institutional autonomy, which increase the lack of accountability of faculties and HEIs; and a tendency to recurrent teacher and student strikes in the sector.

81. Changing the culture of existing HEIs will be slow and uneven across functions and organizational units. Some faculties and departments are likely to embrace change and seize the opportunities presented by the proposed project to innovate and improve the provision of quality services to students, while others may actively resist and seek to undermine proposed changes to the status quo. The focus on selected institutions and programs offers the opportunity to introduce client-focused and efficiency driven delivery models.



82. To minimize the risks reviewed above, including mitigating the risks related to resistance to change by some stakeholders, a combination of strategies will be adopted including: (i) commencing the project by addressing a limited number of systemic challenges; (ii) utilizing quick wins and institutional results in selected HEIs to trigger wider systemic change; (iii) introducing a new operating environment in selected institutions/programs that are conducive to higher learning and relevance; and (iv) the building of consensus in support of an agenda for change through a communications strategy showcasing the positive achievements of institutions and organizational units that effectively embraced change.

**A. Risk Ratings Summary Table**

<b>Systematic Operations Risk- Rating Tool (SORT)</b>	
<b>Risk Category</b>	<b>Rating</b>
1. Political and Governance	Substantial
2. Macroeconomic	Moderate
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Moderate
5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	Substantial
7. Environment and Social	Substantial
8. Stakeholders	Substantial
<b>OVERALL</b>	Substantial

**B. Overall Risk Rating Explanation**

83. The project’s overall risk rating is assessed as *Substantial*. In light of the existing consensus on the need for reform of the higher education sector, agreement on a medium term strategy is highly likely, although there may be differences of opinion with respect to the timing and implementation of reforms. Mitigation measures have been proposed to minimize the fallout from any delays in reform. Following the implementation of mitigation measures, the overall implementation risk is rated *Substantial*.

**VI. APPRAISAL SUMMARY**

**A. Economic and Financial Analysis**

84. **The proposed Higher Education Support Project (HESP) aims to bring higher and more sustainable returns to tertiary education in Mali, with focus on the skills needed by the agriculture, livestock and mining sectors.** Agriculture, livestock and mining account for more than 40 percent of Mali’s GDP, but only a minimal share of the population has the training and skills to advance these sectors with the adoption and generation of knowledge, technology and innovations. The project will benefit directly about 35,000 students as well as the entire tertiary education system. It will contribute to improving the quality and relevance of skills for

the labor market, thus improving employability and productivity of graduates. In addition, the project will provide highly qualified workers who could spread new techniques and technologies to impact positively agriculture and livestock productivity in the region, and improve mining revenues, thus impacting directly small farmers and poor and vulnerable populations. These three sectors account for 40 percent of the country's GDP and employ around 75 percent of adults mainly in informal sectors.

**85. Cost-benefit analysis (reported in Annex 6) strongly confirms the cost-effectiveness of HESP both in terms of labor cash earnings and in terms of household per capita consumption.** Using a rigorous cost-benefit methodology detailed in Annex 5, for both wages and consumption, the Present Discounted Value (PDV) of net benefits and the Internal Rate of Return (IRR) to higher education are higher in the case with HESP than the case without HESP, given the provided assumptions on impacts of HESP on differences in employment, wages and household per capita consumption between tertiary-educated and secondary-educated individuals. Importantly, the IRRs with HESP (ranging from 7.8 percent for earnings to 9.9 percent for consumption) are much higher than the discount rate, which is the deposit rate at the Mali central bank; this means that at the individual level, HESP makes higher education a greatly desirable investment.

**86. HESP is also projected to significantly increase the value of higher education at the public level, even after factoring in the US\$33 million cost over the five-year duration of the proposed project, and without including future generations of Malian students and the public that may continue to benefit from the proposed project.** The sector background analysis above identifies various channels through which higher education could benefit the society and economy as a whole, through employment, earnings, behavior, entrepreneurship, investment, consumption, policy and decision making, and adoption, generation, and transfer of knowledge, skills and technology. The approximately 20,000 students that HESP expects to directly benefit in the four selected HEIs are estimated to represent an increase of about 1 percent of tertiary- and secondary-educated workers of ages 25-34 attributable to HESP as they graduate, given the provided impacts of HESP on differences in employment, wages and household per capita consumption between tertiary-educated and secondary-educated individuals. The resulting PDVs and IRRs at the public level are found to be large for both wages and consumption, and particularly large for wages at more than CFA Franc 150 trillion and 16.3 percent, respectively.

**87. If the reforms under HESP are sustained and built upon in higher education as well as in the education sector overall, future generations could also benefit.** Less tangible benefits other than wages and consumption, as mentioned above, could also materialize over the longer term. The total cumulative net benefits for the economy and society as a whole in the long run could be even larger than estimated here. Finally, sensitivity analyses show significant net private and public gains from HESP even in the case of significantly less optimistic assumptions.

**88. World Bank's value-added for this project:** The Bank has the global knowledge and experience it takes to address systemic issues such as those limiting the development of the higher education system in Mali. In particular, the Bank has been preparing and implementing higher education projects in all regions, including the recent regional ACE project, while also staying strongly involved in knowledge management and the sharing of best practices through a

dedicated higher education coordinator. In addition, other donors in Mali have been supporting basic education with limited integration of the implications of its expansion to other levels of education, particularly tertiary education, and very few of them are involved in supporting the tertiary education sector itself; when they do the support is narrow. In this setting, the Bank has a key role to play to support the sector more broadly, using its expertise to develop best practices, and use its convening power with the government and other donors to raise awareness, spur reforms and attract additional financing to the sector.

## **B. Technical**

89. The project design is supported by strong technical and analytical underpinnings. In particular, the design of both components builds on lessons from international experience as documented in several studies, while striving to adapt them to the case of Mali. The key lessons from these studies and the process for adapting them to the Mali context are reported in section C, page 16, under Lessons Learnt.

## **C. Financial Management**

90. The MoHE is the project implementing agency. It will have overall responsibility for project coordination and implementation. The Ministry has established a PIU and appointed a project coordinator and other key members including an FM officer and an accountant. The PIU will bear overall responsibility for FM activities.

91. The Bank FM team has conducted an assessment of the implementing agency to ensure FM capacity meets the minimum requirements specified in OP BP10.00. This assessment complied with the Financial Management Manual for World Bank-Financed Investment Operations that became effective on March 1, 2010 and AFTFM Financial Management Assessment and Risk Rating Principles.

92. The assessment revealed a number of strengths including the existence of a multi-project accounting software package, and a procedures manual pertaining to the previous Higher Education Project which was under preparation in 2011. However, these strengths are undermined by poor alignment with the needs and requirements of the proposed project. The existing procedures manual of the initial Education Project is not aligned with the proposed activities under the HESP and the accounting software is not adequately customized to fit proposed project activities. In addition, the FM team composed of civil servants has no previous experience of Bank-financed operations and the overall internal control environment remains weak.

93. As a result of the above mentioned FM capacity constraints, the following actions need to be completed to ensure adequate FM arrangements for all aspects of the Project: (i) the FM procedures of the project operational manual (POM) including internal controls, budget process, assets safeguards, and description of roles and responsibilities of all stakeholders should be updated no later than two months after effectiveness; and (ii) the accounting software should be customized to take into account the specificities of the project no later than two months after effectiveness. In addition, the project's FM team will receive technical support from the FM officer of the Ministry of Basic Education who is a seasoned FM specialist familiar with Bank procedures.

94. Moreover, with regard to the strengthening of the internal control environment, and implementation of the DLI mechanism, additional measures will be requested including: (iii) the recruitment of an internal auditor to carry out quarterly (and as needed) internal control reviews and physical verifications, and support strengthening HEIs internal audit capacity within four months of project effectiveness. Further, in order to meet external review requirements, the PIU will need to recruit an external auditor no later than five months after effectiveness.

95. Disbursement will be report-based for sub-component 1.1. Funds will be disbursed annually to the four selected HEIs conditional on the satisfactory achievement of DLIs. Achievement of DLIs will be assessed through a DLI achievement assessment report provided by the QA unit of the Ministry (on the basis of the DLIs monitoring protocol). The DLIs will be applied, following an IDA No Objection, on the assessment of these reports, against reimbursement of non-procurable expenditures line items related to salaries and additional teaching hours up to an aggregated amount not exceeding the total of annual amount indicated for DLIs with respect to each HEI. The PIU will recruit a consultant with a strong education background and audit skills to perform a review of the assessment report prior to the payment. Each participating HEI will open a dedicated account in a commercial bank named “*Subvention PADES-Name of the HEP*” to aid audit procedures. Disbursement under components 2 and 3 will be transactions-based. Annual audits of the HEI are expected to cover all resources including project funds.

96. Based on the Bank’s assessment, residual FM risk for the project is deemed *Substantial*. The proposed FM arrangements are considered satisfactory in fulfillment of the requirements of Bank OP 10.00 requirements following the implementation of mitigation measures. The implementing entity will ensure that the Bank’s Guidelines: *Preventing and Combating Fraud and Corruption in Projects financed by IBRD Loans and IDA Credits and Grants* (revised January 2011) are followed under the project.

#### **D. Procurement**

97. Procurement for the proposed project will be carried out in accordance with the World Bank’s “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 revised July, 2014, “Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits and Grants by World Bank Borrowers” dated January 2011 and revised July, 2014, and the “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, and the provisions stipulated in the Financing Agreement. National Competitive Bidding (NCB) shall be in accordance with procedures acceptable to the Bank.

98. The World Bank team undertook a procurement assessment of the MoHE. The Minister established a PIU attached to the Secretary General (SG) of the Ministry. The SG has appointed civil servants to the position of project coordinator and other key members including a procurement specialist and a procurement officer. The assessment was carried out by the Bank Procurement Specialist based in Bamako, in line with OP 11.00 and BP 11.00 updated on April 2013. The PIU will have overall responsibility for procurement activities.

99. The assessment has revealed a number of weaknesses in procurement management and oversight, including: (i) the absence of a manual of procedures within the *Direction des Finances*

*et du Matériel* (DFM); (ii) the lack of personnel proficient in procurement capable of implementing procurement actions in line with Bank procedures; (iii) the senior staff within the MoHE responsible for process control and approval are not familiar with Bank procurement procedures; (iv) the risk of exposure of the procurement specialists who are civil servants to influence and pressure from their hierarchy; (v) the risk of staff moving to other positions in the public or private sectors after they have been well trained in procurement; (vi) inadequate communication and interaction between the beneficiaries (HEIs) and the PIU which may lead to delays in the drafting of terms of reference (TORs) or technical specification and/or the poor estimation of the costs; and (vii) the lack of adequate space dedicated to the archiving of documents.

100. World Bank operations in Mali have suffered from extended delays in procurement processing, with a significant time lost in the preparation of: procurement documents (bidding documents, request for proposals, bidding evaluation reports and technical evaluation reports. In addition these proposals tend to be of poor quality. Delays are also found in the contract award and signature processes of Government. These experiences have been factored into the design of procurement arrangements.

101. The overall procurement risk for the proposed project is considered **Substantial**. In order to mitigate the risks identified in the procurement assessment, an action plan will be prepared, in consultation with the client (see Annex 3). With the implementation of the proposed measures of the action plan and the support of World Bank team, the overall residual procurement risk will be rated **Moderate**.

#### **E. Social (including Safeguards)**

102. The social impact of the proposed project is expected to be positive. The project will improve the management of existing HEIs (which has not been effective over the past decade) and put into place licensed programs with strong links to the needs of the economy, which will benefit youth in both the formal and informal sector including through more and better jobs. Teachers' unions and student unions have been involved in the design of the program to give more autonomy to universities and their concerns have been integrated. The project will not include any land acquisition or have any impact on resettlement.

#### **F. Environment (including safeguards)**

103. The Mali HESP is classified as Category B as none of its activities is expected to induce a negative impact on environmental resources and/or the quality of life in areas affected by implementation. However, the refurbishment of existing facilities and the construction of new premises for the DNESRS and the University of Segou (UOS) could result in the production of solid waste. The PIU will ensure that: (i) a provision is included in related contracts for the adequate collection and disposal of waste by contracted enterprises; and (ii) university budgets dedicate adequate resources for waste management and sanitation. All works/activities will be carried out in accordance with national and local laws and regulations.

104. A review of the institutional capacity of implementing institutions revealed a basic institutional and regulatory framework for waste management in Mali (Decree no. 01-394/P-RM of September 2001) enforced by the National Department for the Clean-Up and Control of Pollution and Pollutants (*Direction nationale de l'assainissement et du contrôle de la pollution et des nuisances* - DNACPN) and its decentralized units. Almost all the major municipalities

have established waste management systems run in partnership with the private sector and non-governmental organizations (NGOs). Notwithstanding some difficulties in the collection of domestic and hazardous waste, significant efforts are ongoing for the improvement of the sanitation in public areas.

### **G. Other Safeguards Policies Triggered**

105. Two safeguards policies have been triggered if the need arises: (i) Environmental Assessment OP/BP 4.01; and (ii) Involuntary Resettlement OP/BP 4.12. The existing Environmental and Social Management Framework (ESMF) and Resettlement Policy Framework (RPF) of the Mali Emergency Education Project have been updated to serve as safeguard management tools for the project. The revised ESMF and RPF were disclosed in country on March 30, 2015 and by the Infoshop on April 2, 2015.

### **H. World Bank Grievance Redress**

106. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the World Bank Inspection Panel, please visit [www.inspectionpanel.org](http://www.inspectionpanel.org).

## Annex 1: Results Framework and Monitoring

Country: Mali

Project Name: Higher Education Support Project (P151318)

### Annex 1. A: Results Framework

#### Project Development Objectives

PDO Statement

The development objective of the proposed Mali Higher Education Support Project (HESP) is to improve the relevance of selected higher education programs and the stewardship of the higher education system in Mali.

**These results are at** | Project Level

#### Project Development Objective Indicators

Indicator Name	Baseline	Cumulative Target Values				
		YR1	YR2	YR3	YR4	End Target
Number of programs in participating HEIs that are proposed and developed with the private sector participation (Number)	45	72	91	105	120	135
Increase in Employer satisfaction as measured by employer satisfaction survey of priority sectors of participating HEIs (Percentage)	0	0	0	20	20	40
Tracer Study (for graduates from the selected HEIs conducted) (Yes/No)	No	Yes	No	Yes	No	Yes
Number of institutional development plans approved at public HEIs (Number)	0	5	7	8	9	9
Number of Public HEIs with a functional CA (Board of Trustees) (Number)	0	5	7	8	9	9
Direct project beneficiaries (Number) - (Core)	0	10,000	15,000	15,000	25,000	35,000
Female beneficiaries (Percentage - Sub-Type: Supplemental) - (Core)	0	20	20	25	35	35

## Intermediate Results Indicators

Indicator Name	Baseline	Cumulative Target Values				
		YR1	YR2	YR3	YR4	End Target
Number of national students enrolled in licensed programs at participating HEIs (Number)	10,000	14,500	15,700	16,600	18,000	18,900
Number of female national students enrolled in licensed programs at participating HEIs (Number - Sub-Type: Breakdown)	2,500	2,700	3,000	3,500	4,200	5,000
Number of teachers trained in the licensed programs at participating HEIs (Number)	120	245	380	560	650	780
Share of budget in participating HEIs allocated to pedagogical inputs (Percentage)	10.00	15.30	20.90	25.60	28.50	30.00
Increase in Amount of cash generated internally at participating HEIs (percentage)	100.00	130.00	140.50	152.00	155.50	160.00
Quality-Assurance unit established and operational, with semi-autonomous status (Yes/No)	No	No	No	Yes	Yes	Yes
Number of public HEIs with a management information system with operational resource management (Number)	0	5	9	9	9	9
MIS statistical report published annually with relevant data from # HEIs (Public and Private) (Yes/No)	No	Yes	Yes	Yes	Yes	Yes
Number of users accessing Digital library system (Number)	0	1,000	3,000	5,000	7,000	1,0000
Annual Report on DLIs produced on time (Before end of March) (Yes/No)	No	Yes	Yes	Yes	Yes	Yes
Number of public HEIs with proposal(s) for acquiring support from African Centers of Excellence in West and Central Africa (Number)	0	2	4	6	6	6



## Annex 1.B: Indicator Description

### Project Development Objective Indicators

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
Number of programs in participating HEIs that are proposed and developed with the private sector participation	This refers to the Licensed programs approved by the QA unit of the MOHE following a request of habilitation by the HEI, after being approved by the Board of Trustees based on the Conseil de Perfectionnement (CP) recommendation which comprises members of the private sector specialized in the area of the program (50 percent). The licensing process will be strengthened under Component 2 of the project. Licensed programs include both existing programs to be newly licensed and new programs.	Annual	Report	MoHE/DNESRS
Increase in Employer satisfaction measured by survey in priority sector of participating HEIs	An employer's survey will be conducted three times during project implementation; one during the first year of project, another during the third year, and a third at the end of the project, to assess employers satisfaction as regard to graduates from priority sectors (Agriculture, Livestock, and Mining). The indicator will measure the increase in the rate of employers' satisfied and very satisfied with the graduates.	Three times during project	Survey will be conducted during the first year of the project to define the baseline from which increase will be assessed.	MoHE/ DNESRS, (Planning Unit)
Tracer Study (for graduates from the selected HEIs conducted)	A tracer study to monitor employment of graduates from participating HEIs in priority sectors supported by the project.	Three times during project	Tracer report	MoHE/Participating HEIs
Number of institutional development plans approved at public HEIs	Approved institutional development plan refers to the HEI five year strategic plan, including its priorities, planning, budget, indicators, as well as relevant information for its implementation, that is approved by the CA and satisfactory to the Bank.	Annual	SIGES-The MoHE statistical information system.	MoHE / DNESRS (Planning and QA Units)

Number of Public HEIs with a functional CA (Board of Trustees)	A functional Board of Trustees will be defined based on the composition that has to include at least 30 percent of private sectors representatives, which meet twice a year to approve the HEI budget and relevant documents, thus ensure the HEI autonomy.	Annual	SIGES-HEI progress reports	MoHE / DNESRS (Planning and QA Units)
Direct project beneficiaries	Number of students benefitting from the project (in the four selected HEIs and other HEIs also benefitting from the project). Supplemental Value: Female beneficiaries (percentage).	Three times during project implementation	MoHE report and surveys	MoHE Planning Unit
Female beneficiaries	Number of female students benefitting from the project (in the four selected HEIs and other HEIs also benefitting from the project).	Three times during project implementation	MoHE report and surveys	MoHE Planning Unit

### Intermediate Results Indicators

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
Number of students enrolled in licensed programs at participating HEIs	Number of students in licensed programs.	Annual	SIGES-HEI progress reports	MoHE/ DNESRS; HEIs
Number of female students enrolled in licensed programs at participating HEIs	This refers to the percentage of female students enrolled in licensed programs in participating HEIs.	Annual	MoHE statistical report/HEIs reports	MoHE
Number of teachers trained in the licensed programs at participating HEIs	This indicator refers to teachers who received in-service or pre service training which allow them to teach satisfactorily the renovated program content.	Annual	SIGES; -HEI progress reports	MoHE/ DNESRS; HEIs
Share of budget in participating HEIs allocated to pedagogical inputs	Share of budget allocated to Pedagogical inputs refers to non-capital allocations which improve teaching-learning processes with the exclusion of salaries, additional hours and scholarships	Annual	SIGES-HEI progress reports	MoHE/ DNESRS; HEIs

Increase in amount of cash generated internally at participating HEIs	The cash generated internally refers to the HEI budget with the exclusion of the national budget contribution.	Annual	SIGES-HEI progress reports	MoHE/ DNESRS; HEIs
Quality-Assurance unit established and operational, with semi-autonomous status	The “Quality Assurance Unit” or “QA” means the semi-autonomous unit in charge with programs accreditation to be established within DGESRS.	Annual	MoHE project report	MoHE/ DNESRS
Number of public HEIs with a management information system with operational resource management	The Management Information System or MIS means the MoHE data collection and processing information system to be established to collect yearly relevant data and processes for policy decision.	Annual	MoHE project report	MoHE/ DNESRS
MIS statistical report published annually with relevant data from # HEIs (Public and Private)	Relevant Data refers to a complete set of education statistics covering HEIs for the considered year. The report will include information on private and public HEIs.	Annual	SIGES	MoHE/ DNESRS (Planning Unit)
Number of users accessing digital library system	Number of users accessing Digital library system means students and faculty members’ private and public who use digital resources provided through the project.	Annual	MoHE project report-SIGES	MoHE
Annual Report on DLIs produced on time (Before end of March)	Each year the PMU will make available a report, supervised by the DGESRS and the QA unit, which assess progress made by each participating HEI on each DLI and DRI.	Annually	MoHE/PCU report	MoHE/PIU/DNESRS
Number of public HEIs with proposal(s) that are supported by African Centers of Excellence in West and Central Africa	Each year, under component 2, the project will select proposals from public HEIs to develop a partnership with ACE institutions, and will report on the number of HEIs that are granted support.	Annually	MoHE project report	MoHE/PIU/DNESRS

**Annex 1.C: Disbursement Linked Indicators and Results for Sub-Component 1.1**

Disbursement Linked Indicator and maximum amount per HEI (per year)	Disbursement Linked Results (DLRs)	Maximum Amount allocated to DLR (US\$) per year and HEI (years 1 to 4) <sup>12</sup>				Method of definition of the amount to be paid (based on Annex 4: protocol for monitoring achievement of the DLR)
		IPRK	ENI	USTTB	UOS	
<b>DLI1 Improved Institutional Governance.</b> <b>IPRK=US\$150,000</b> <b>ENI=US\$200,000</b> <b>USTTB=US\$300,000</b> <b>UOS=US\$300,000</b>	DLR#1: Functional Board of Trustees (or University Council) of HEIs in place	50,000	50,000	100,000	100,000	Yes/No
	DLR#2: Adoption and implementation of management tools and procedures of HEIs.	50,000	100,000	100,000	100,000	Yes/No
	DLR#3: Approval of HEIs IDPs and yearly operational budget with indicators.	50,000	50,000	100,000	100,000	Yes/No
<b>DLI2 Improved Relevance of Selected Programs.</b> <sup>13</sup> <b>IPRK=US\$350,000</b> <b>ENI=US\$600,000</b> <b>USTTB=US\$800,000</b> <b>UOS=US\$800,000</b>	DLR#4: Number of training programs licensed as per agreed guidelines	100,000	150,000	200,000	200,000	A= Target set for the number of renovated or new programs licensed and previously approved by the Board with the CP recommendation; X=\$ (000) ; B= achieved number of programs; If B<A, then the amount payable will be: $Y = (B.X)/A$
	DLR#5: Number of new students enrolled in licensed programs developed with the private sector and approved by the Board of Trustees.	100,000	150,000	200,000	200,000	A= number of NE; X = \$ (000); If NE (B) is less than A, the amount payable will be: $Y = (BX)/A$
	DLR#6: Number of teachers trained in the licensed courses approved by the	50,000	150,000	200,000	200,000	A = number of NEF; X = \$ (000); If NEF (B) is less than a, the

<sup>12</sup> The amount allocated to each DLR and/or each institution in the DLR can change in alignment with the provisions of the Financing Agreement.

<sup>13</sup> For DLR 4-7 under DLI 2 to be considered for any payment, the result has to be achieved at least at 50 percent of the target for the year.

	Board of Trustees.					amount payable will be: $Y = (BX)/A$
	DLR#7: Percentage Increase in Financial Resources Generated Internally	100,000	150,000	200,000	200,000	A= percent RFG X=\$ (000) ; If RFG (B) is lesser than a, the amount to be paid will be : $Y= (B.X)/A$
<b>Yearly maximum amount per HEI</b>		500,000	800,000	1,100,000	1,100,000	

**Annex 1.D: Disbursement Linked Indicators and Results for the four selected HEI under Sub-Component 1.1**

**National School of Engineering (*Ecole Nationale des Ingénieurs-ENI*)**

Disbursement linked indicators (DLIs)	Disbursement Linked Results (DLRs)	Baseline/DLI0 (March 2015)	Target Year1 (May 2016)	Target Year 2 (May 2017)	Target Year 3(May 2018)	Target Year 4(May 2019)	End of Project Target
DLI1: Improved Institutional Governance	DLR#1: Functional Board of Trustees (or University Council) of HEIs in place. (#of sessions held/year)	1	2	2	2	2	2
	DLR#2: Adoption and implementation of management tools and procedures of HEIs, and yearly publication of IMS and audit reports	Yes	Yes	Yes	Yes	Yes	Yes
	DLR#3: Approval of HEIs Strategic Plans and yearly operational budget with indicators	Yes	Yes	Yes	Yes	Yes	Yes
DLI2: Improved relevance of selected programs	DLR#4: Number of training programs licensed as per agreed guidelines	4	8	12	16	20	25
	DLR#5: Number of new students enrolled in licensed programs developed as per agreed guideline	300	600	1,000	1,500	2,100	2,100
	DLR#6: Number of teachers trained in licensed programs developed as per agreed guidelines	8	23	38	55	70	85
	DLR#7: Percentage Increase in Financial Resources Generated Internally (CFA,000)	259.150	15	52	70	75	80

**Institute Polytechnic of Katibougou (Institut Polytechnique Rural de Katibougou-IPRK)**

Disbursement linked indicators (DLIs)	Disbursement Linked Results (DLRs)	Baseline/DLI0 (March 2015)	Target Year1 (May 2016)	Target Year 2 (May 2017)	Target Year 3(May 2018)	Target Year 4(May 2019)	End of Project Target
DLI1: Improved Institutional Governance	DLR#1: Functional Board of Trustees (or University Council) of HEIs in place. (#of sessions held/year)	<i>1</i>	2	2	2	2	2
	DLR#2: Adoption and implementation of management tools and procedures of HEIs, and yearly publication of IMS and audit reports	<i>Yes</i>	Yes	Yes	Yes	Yes	<b>Yes</b>
	DLR#3: Approval of HEIs Strategic Plans and yearly operational budget with indicators	<i>Yes</i>	Yes	Yes	Yes	Yes	<b>Yes</b>
DLI2: Improved relevance of selected programs	DLR#4: Number of training programs licensed as per agreed guidelines	<i>20</i>	30	35	39	42	<b>45</b>
	DLR#5: Number of new students enrolled in licensed programs developed as per agreed guideline	<i>750</i>	2,300	2,400	2,500	2,750	<b>3,000</b>
	DLR#6: Number of teachers trained in licensed programs developed as per agreed guidelines	<i>0</i>	10	30	55	65	<b>70</b>
	DLR#7: Percentage Increase in Financial Resources Generated Internally (CFA,000)	<i>586.7</i>	60	65	75	80	<b>85</b>

**University of Sciences and Technology of Bamako (*Université des Sciences, Techniques et Technologies de Bamako-USTTB*)**

<b>Disbursement linked indicators (DLIs)</b>	<b>Disbursement Linked Results (DLRs)</b>	<b>Baseline/DLI0 (March 2015)</b>	<b>Target Year1 (May 2016)</b>	<b>Target Year 2 (May 2017)</b>	<b>Target Year 3 (May 2018)</b>	<b>Target Year 4 (May 2019)</b>	<b>End of Project Target</b>
DLI1: Improved Institutional Governance	DLR#1: Functional Board of Trustees (or University Council) of HEIs in place. (#of sessions held/year)	1	2	2	2	2	2
	DLR#2: Adoption and implementation of management tools and procedures of HEIs, and yearly publication of IMS and audit reports	Yes	Yes	Yes	Yes	Yes	Yes
	DLR#3: Approval of HEIs Strategic Plans and yearly operational budget with indicators	Yes	Yes	Yes	Yes	Yes	Yes
DLI2: Improved relevance of selected programs	DLR#4: Number of training programs licensed as per agreed guidelines	11	21	24	26	28	30
	DLR#5: Number of new students enrolled in licensed programs developed as per agreed guideline	9,553	9,953	10,400	10,900	11,500	12,200
	DLR#6: Number of teachers trained in licensed programs developed as per agreed guidelines	80	160	240	320	400	500
	DLR#7: Percentage Increase in Financial Resources Generated Internally (CFA,000)	371.000	20	30	40	50	60



**University of Segou (*Université de Ségou-UOS*)**

<b>Disbursement linked indicators (DLIs)</b>	<b>Disbursement Linked Results (DLRs)</b>	<b>Baseline/DLI0 (March 2015)</b>	<b>Target Year 1 (May 2016)</b>	<b>Target Year 2 (May 2017)</b>	<b>Target Year 3 (May 2018)</b>	<b>Target Year 4 (May 2019)</b>	<b>End of Project Target</b>
DLI1: Improved Institutional Governance	DLR#1: Functional Board of Trustees (or University Council) of HEIs in place. (#of sessions held/year)	1	2	2	2	2	2
	DLR#2: Adoption and implementation of management tools and procedures of HEIs, and yearly publication of IMS and audit reports	Yes	Yes	Yes	Yes	Yes	Yes
	DLR#3: Approval of HEIs Strategic Plans and yearly operational budget with indicators	Yes	Yes	Yes	Yes	Yes	Yes
DLI2: Improved relevance of selected programs	DLR#4: Number of training programs licensed as per agreed guidelines	10	13	20	25	30	35
	DLR#5: Number of new students enrolled in licensed programs developed as per agreed guidelines	175	400	1,000	1,200	1,400	1,600
	DLR#6: Number of teachers trained in licensed programs developed as per agreed guidelines	31	51	76	101	131	131
	DLR#7: Percentage Increase in Financial Resources Generated Internally (CFA,000)	33.000	161	180	200	220	250

## **Annex 2: Detailed Project Description**

### **Republic of Mali: Higher Education Support Project**

1. The proposed project will support the Government's ongoing and planned higher education reforms to enhance the capacity of HEIs in Mali to produce high quality graduates with skills aligned to labor market needs. The proposed HESP will do so by improving the governance framework for higher education, while concurrently supporting direct improvements in selected programs and institutions. The project will achieve the governance objective through a pragmatic approach, supporting ongoing institutional reforms aimed at conferring more autonomy to HEIs while strengthening the planning, oversight, and information management of the MoHE (autonomy with accountability). This approach will be implemented in a two-pronged fashion; on the one hand supporting stronger stewardship of the MoHE through strengthened quality assurance, M&E and the coordination functions of systems and bodies; and, on the other hand, by addressing constraints to more fundamental reform, by supporting the implementation of measures to improve governance in selected institutions premised on best practices with the potential for replication and scaling up in other institutions and also support better stewardship of the sector.

2. By contributing to the progressive improvement of the sector's governance framework, the project aims to improve the relevance of programs through direct support to the implementation of a set of new (or upgraded) labor market-oriented academic programs, and the introduction of innovative financing mechanisms (performance-based financing - PBF) through Disbursement Linked Indicators (DLIs) linked to results. If implemented correctly, the DLI approach (further illustrated below) is expected to be an important contributor towards the establishment of a more efficient financing structure for the sector.

3. In sum, the Project will: (i) support the development and implementation of labor market oriented programs in selected HEIs through quality enhancing measures and better governance of the HEIs (including management and financing); and (ii) strengthen the capacity of the higher education system to better plan and implement higher education reforms, monitor the quality and relevance of programs, provide relevant data for policy decisions and coordinate the system's key stakeholders. The project will undertake these activities through three components: Component 1: Support to Selected Public HEIs; Component 2: Higher Education System Support; and Component 3: Project Management and Technical Assistance. These three components will be implemented using a two-pronged disbursement mechanism: DLIs<sup>14</sup> for Sub-Component 1.1 to support the implementation of performance contracts with HEIs and directly support the implementation of activities aimed at improving governance, quality, and relevance of programs; and traditional expense-based disbursement for Sub-components 1.2 and 1.3 as well as for Components 2 and 3.

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<sup>14</sup> See Annex 1.C: DLIs and Results.

## **Component 1: Support to Selected Public HEIs (US\$22 million)**

4. Component 1 will improve the relevance of selected higher education programs, while contributing to overall improvements to the stewardship of the sector, by supporting governance improvements and reforms and quality related interventions in selected HEIs, with a strong commitment to reform, offering programs in agriculture, livestock, mining and technology. Component 1 has three sub-components: Sub-Component 1.1: Support to selected existing public HEIs; Sub-Component 1.2: Support to the University of Segou's new livestock and animal health department; and Sub-Component 1.3: Support to the development of the new Bamako Africa School of Mines.

5. ***Sub-Component 1.1: Support to selected existing HEIs (US\$16 million).*** Those HEIs include: (i) Institute Polytechnic Rural of Katibougou (*Institut Polytechnique Rural de Katibougou* - IPRK) with a focus on agriculture, research and outreach; (ii) the University of Segou (*Université de Ségou* - UOS) with a focus on livestock, and agriculture programs, with a component on water management and irrigation; (iii) University of Science and Technology (*Université des Sciences, Techniques et Technologies de Bamako* - USTTB) for the provision of training in applied sciences to support other sectors; and (iv) The National School of Engineering (*Ecole Nationale d'Ingénieurs* - ENI) focused on engineering programs including mining.

6. These four HEIs were selected based on the availability of programs targeting the agriculture, livestock and mining sectors which contribute to close 40 percent of the country's GDP, and employ nearly 75 percent of the country's workforce. Three of the selected institutions are recognized as leaders in their fields while the fourth, UOS, when operational, will constitute the first public regional university of the country, with strong developmental potential given its strategic location in the *Office du Niger* (an important agricultural and livestock zone). These HEIs have also demonstrated their willingness to undertake reform through their commitment to the following governance related actions: (i) the establishing of Boards of Trustees (*Conseil d'Administration or Conseil d'Université* - CA) including representation of non-public stakeholders (private sector, diaspora, etc.) to ensure greater institutional autonomy. It is envisaged that each respective HEI's CA will approve the relevant institution's Institutional Development Plan (IDP) and the Annual Work-Program (AWP) for the first year, including related objectives, baselines, and targets; (ii) establish functional *Conseil de Perfectionnement* (CP) with participation from representatives of private businesses to identify and develop new programs and review existing programs and curricula, including those to be developed during the first year of the project; (iii) develop and adopt HEIs implementation manuals and management tools, and a schedule for audits; and (iv) finalize IDPs with clear objectives and annual targets including agreed upon DLIs and associated results. The following measures have been implemented: (a) the establishment and convening of CAs at each of the four HEIs; (b) the implementation of functional CPs in all selected HEIs which will propose programs to be licensed for the coming academic year; (c) the drafting of a manual (by four HEIs); and (d) submission of institutional strategic plans by all four HEIs. The documents are currently being reviewed by the Bank.

7. The HESP will support implementation, following the approval by the CA (prior to effectiveness of project), of each selected HEI's five-year (2015-2020) IDP and AWP. The AWP will serve as the basis for a contract, to be signed by the rector of each HEI, the Minister of Higher Education and Minister of Economy and Finance, defining the agreed objectives and

indicators that each HEI is committed to achieving in each year. The AWP will include all activities and funds (including government and external funds allocated to the institution), and also define with clear roles and responsibilities, and mechanisms for M&E to be used to assess the annual HEI performance. The annual AWP and annual audit reports will complement the report from the QA unit for each HEI's performance; these reports will be used for DLIs monitoring.

8. The implementation of the IDP is expected to improve the quality and relevance of HEIs and their programs, through the upgrading of existing programs and/or the introduction of new licensed programs, while concurrently encouraging the emergence of a diversified and dynamic higher education system capable of responding to the needs of the economy and society at large. In particular, the project will create the conditions for HEIs to: (i) generate their own resources through the development of programs with greater relevancy and higher demand; (ii) develop efficient partnerships with the private sector, and provide more training and employment opportunities for students; and (iii) improve the quality and management of programs and institutions. The project will further enable the Government to develop capacity for effective regulation of the sector, including the accreditation and monitoring of institutions and programs.

9. To further support and enhance good institutional governance and the relevance of programs, the project will support HEI objectives through disbursement linked to selected DLIs in the IDPs. The government has already accrued experience in funding program contracts in the health and agriculture sectors, as well as for the establishment of the Centre for Applied Research and Training. The introduction of funding mechanisms premised on DLIs will build on this previous experience, while contingently laying the basis for a performance-based financing (PBF) approach with the potential for scaling up through financing reforms at a later date. Two DLIs with seven Disbursement Linked Results (DLRs), related to governance, relevance and quality dimensions, with relevant targets for each selected HEI have been identified and are reported in Annexes 1.C, and 1.D, respectively, while Annex 4 includes detailed protocols for the monitoring of DLIs and DLRs. The project will disburse against EEPs related to salaries and additional teaching hours up to an aggregated amount not exceeding the total annual amount indicated for DLIs for each HEI.

10. Taking into account the differential needs of the selected HEIs, including, *inter alia*, the overall number of students and qualified teachers, and the need for new and/or upgraded equipment, annual amounts dispersed to institutions will vary from an annual allocation of US\$ 500,000 for the relatively well endowed IPRK, to US\$1,100,000 for USTTB (with much larger enrollment and more limited teaching staff) and the UOS (which remains under development). In all cases, these amounts represent a significant share of the current recurrent budgets of these institutions (approximately 30 to 60 percent) and should contribute to the financing of a significant share of their IDPs, including the recruitment of fixed-term teachers, teacher training activities, and the procurement of lab equipment and pedagogical materials.

11. The achievement of the specific DLR targets will be confirmed on the basis of the DLIs and results monitoring protocols defined and agreed upon between each participating HEI and the MoHE. With the exception of salaries and the payment of additional teaching hours, the project will not monitor any other expenditure, and will focus on the achievement of agreed results. To achieve the DLIs, the HEIs will have to fulfill agreed upon governance indicators and successfully implement their IDPs. In cases where HEIs are unable to achieve the agreed results, and are not in a position to be fully funded as per the maximum amount set for DLIs, remaining

funds will either be re-allocated among the remaining institutions, or allocated to other HEIs implementing reforms and developing new programs in line with established criteria. This approach will foster greater synergy between the project components with a focus on both system-wide and institutionally specific reforms, and provide greater incentives for HEIs to move toward the institutionalization of a more efficient, relevant, and responsive system of tertiary education. Overall, it is expected that more autonomous HEIs (with governing councils involving representatives from the private sector and other stakeholders), with clear institutional development plans, will be better placed to offer quality programs relevant to the demands of the labor market, and ensure more efficient use of limited resources available to the sector (while also leading to an improvement in the institutions' financing structures).

12. **Key activities:** This sub-component will support the activities included in the approved IDP and its AWP. These activities have to be focused on achieving the HEI's development objectives of improving the quality and relevance of programs, and the governance and management of the institution. The IDP could include, for instance, provision of books and scientific documentation, information and communications technology (ICT), laboratory equipment and supplies, research activities, staff recruitment and development, and investment in infrastructures. To support their objectives, participating HEIs could also use part of the support to buy services from institutions participating in the ACE Project. Finally, additional capacity building to the HEIs and the PIU in institutional plan development and quality assurance (QA) will be supported through Components 2 and 3.

13. **Beneficiaries:** Component 1 is expected to directly benefit 20,000 students (new and already enrolled) and 1,000 academic and technical support staff in the selected HEIs.

14. **Implementation arrangements:** the sub-component will be coordinated by the PIU under the coordination of the head of Component 1 who is a civil servant from the Quality Assurance Unit (QA Unit) under the DNESRS. Each HEI will execute its institutional development plan and thus have its own fiduciary responsibilities. Contracts will be signed by the rector of the HEI, the Minister of Higher Education and the Minister of Economy and Finance, and will define the agreed objectives and indicators each HEI would commit to achieve for the year. Under the leadership of the PIU coordinator and the head of the DNESRS, the head of Component 1 will serve as a liaison between HEIs and the unit at the central level in charge of QA. S/He will facilitate synergies and learning processes between the two levels with the aim of setting up a functioning national system of QA to support an upgrade of the system. The implementation arrangements of this component and the project, in general, are meant to strengthen both the system and HEIs. To carry out the annual evaluation of DLIs, the PIU will hire a consultant to support the QA unit in producing the DLIs and results assessment reports.

15. **Sub-Component 1.2: Support to the University of Segou's livestock department (US\$4 million).** Unlike the three other HEIs due to benefit from the HESP (which are already established and have facilities that will require upgrading), the UOS, the first public regional university in Mali, is still in the process of development and will require greater support for the delivery of programs. Specifically, this sub-component will support the development of a new livestock and animal health department through the construction and refurbishment of new teaching facilities to be built on existing ring-fenced land owned by the university. Mali has an estimated 10 million livestock, many of which are concentrated in the Segou-Mopti area. Related economic activities employ more than a third of the population, predominantly in rural areas. Mali is the primary exporter of livestock in the sub-region, and the development of improved

value chains and the diversification of livestock related products have significant potential to develop new markets for, and expand the scope of, this sub-sector of the economy. The new livestock and animal health department at UOS will support efforts to strategically enhance the competitive advantage of Mali in this area, expand the potential for new jobs, and the development of the agriculture and agri-business in the Niger delta region.

16. **Activities:** Under this sub-component the project will finance civil works, equipment, goods and TA required for the establishment of a modern function facility.

17. **Beneficiaries:** This sub-component will benefit the current and potential new students at UOS, and spur the development of the *Office du Niger* as an agriculture and livestock pole.

18. **Implementation arrangements:** this sub-component will be coordinated by the PIU under the coordination of the head of Component 1. All fiduciary responsibilities will be with the PIU. The project will directly contract with the ENI and the ESIAU, a private higher education school which has been awarded an international architecture prize, to conduct the design of the new animal health department in UOS, and for the oversight of the civil works.

19. **Sub-Component 1.3: Support to the development of the new Bamako Africa School of Mines (US\$2 million).** The government has legally established a new Bamako Africa School of Mines<sup>15</sup> to more effectively address the intermediate and higher level skills gaps for the further development of the Malian mining. The government is also exploring opportunities for participation of the mining sector in the establishment of the school. Some mining companies operating in Mali have already shown interest, with Randgold allocating US\$1 million towards the purchase of land for the school and the financing of consultation processes. The government has requested Bank support to develop a business model for the new school incorporating a Public Private Partnership (PPP) framework to help to ensure that the country is better positioned to meet the skills requirements of all segments of the mining industry. Following the development of this framework, the GoM and the Bank will assess the development process, phases for the establishment of the school and financing options (including PPPs, other international partners, and, if needed, additional financing). Further steps will be defined following the completion of these studies in coordination with the Ministry of the Mines.

20. **Activities:** through this sub-component, the Project will support the feasibility study, architectural plans, curriculum and program development and equipment specifications for the new proposed school.

21. **Implementation arrangements:** Under the leadership of the PIU coordinator, the Ministry of Mines will appoint a member of its staff to be in responsible for activities undertaken in completion of this sub-component. A sub-account will be opened to distribute funds for this sub-component, to be operated jointly by the project coordinator and the representative appointed by the Ministry of Mines. Account oversight is required to ensure the use of funds in line with Bank procedures. A representative of the Ministry of Mines will be part of the PIU and the Project Technical Committee (PTC) and will participate in technical meetings. All fiduciary responsibility will be vested in the PIU.

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<sup>15</sup> The Bamako Africa School of Mines was established by the Decree No 0630/G-DB dated June 4, 2014

## **Component 2: Higher Education System Support (US\$8 million)**

22. Component 2 of the HESP aims to improve the stewardship of the higher education system in Mali by strengthening the GoM's capacity to: (i) articulate and implement reforms; (ii) ensure effective oversight and regulation of the sector, including for the private sector; and (iii) more effectively manage information. This component will support implementation of the MoHE reform package and its Operational Plan, including contingent laws and decrees, to ensure that: (a) the roles and responsibilities of the MoHE are focused and capacitated for policy formulation, QA, M&E, and the promotion of improved performance in HEIs; and (b) universities and other tertiary institutions are empowered with greater autonomy with regard to student admissions, teacher recruitment and budget management.

23. The MoHE's Operational Plan aims to align university programs with the Bachelor-Masters-Doctorate (LMD) system, a standard that has already been adopted at the sub-regional level. The Operational Plan has also assigned a strategic role to the DNESRS in developing a shared vision and implementing a broader sector program with a view to improving access to as well as the quality and relevance of higher education. Component 2 will provide the required support to the MoHE and its key central units to develop and implement the Government's Operational Plan for the sub-sector's improvement. Emphasis will be placed on planning, QA and information management, while also supporting the development of private HEIs in an effort to strengthen the capacity of the various stakeholders of the higher education system and the coordination of this sub-sector.

24. Through Component 2, the project will also build on and complement activities developed by other agencies to foster more synergies around LMD and ICT and information management issues in Mali. In particular, in support of the implementation of this plan, the West African Monetary Union (WAEMU-with AfDB funding) has developed two projects: (i) the *Projet d'Appui à l'Enseignement Supérieur* PAES Project (supported by UNESCO), which has financed a Technical Assistance to identify and develop the content for 22 labor market oriented academic programs for each of the eight member countries of the West Africa region; and the (ii) the *Projet d'Appui à la mise en place de Technologies d'Information et de Communication* (PACTICE), resulting from a collaboration with UNESCO closed in February 2015, which supported an ICT system to connect the Malian University USTTB with those of the sub region. The PAES's TA has allowed key stakeholders, including relevant ministries and industries, to agree on a set of 24 priority programs adapted to the needs of the Malian economy, and a subset of 22 programs for which content has been developed with a consortium of Canadian universities in charge of the TA. The procedures manual for the development of these new programs has been finalized, and could serve for the development of new programs. Procedures include selection criteria for preparing programs, guidelines for preparation, peer review validation processes, selection processes for funding monitoring and evaluation, as well as governance of these new programs. The PAES is also financing connectivity infrastructure aimed at networking Malian Universities by providing appropriate bandwidths and equipment. However, delays in implementation would not allow the entire infrastructure to be developed. In addition, the PACTICE/UNESCO project will provide means to develop a sound infrastructure within USTTB and the needed software for a virtual library which could be used for the sub-sector. Along this line, the Netherlands NICHE Project is providing support whose goal is to improve governance and management of the system, improve capacity of teachers to perform, and support

the development of IMS software. The proposed project will build on and complement those initiatives.

25. In terms of support to the MoHE's oversight and regulatory capacity and capacity to implement reforms and assist HEIs, a particular emphasis will be placed on improving the currently weak Quality Assurance (QA) and planning capacity of the MoHE, as documented in the sector diagnostic. Increasing planning capacity will entail support for the production of: (i) annual statistics on higher education for a better understanding of the higher education system and institutions; (ii) background studies and analysis of sector expenditure, financing and performance; and (iii) tracer studies to be conducted during the first, third and fifth years of project implementation to monitor the employment status of graduates from licensed programs, and employer satisfaction with recruited graduates. Moreover, the capacity of the MoHE's to assist HEIs (both public and private) in the development and monitoring of five-year business plans, and in the preparation of the medium-term Higher Education Sector Plan will also require further strengthening.

26. Enhancing QA will be achieved through the effective implementation of the Bachelor-Masters-Doctorate (*License-Masters-Doctorat-LMD*) system, and the regular review of HEI's institutional development plans, with particular a focus on HEIs supported by the project. The current licensing process will be strengthened by the accreditation of programs by the new semi-autonomous QA unit. There is an on-going discussion with regard to whether this external evaluation will also lead to some form of accreditation of the institutions themselves. HEIs, at a minimum, will be encouraged to undertake self-assessments. The project will finance the training of evaluators for the entire system, commencing with selected HEIs.

27. In order to strengthen these functions of the MoHE, the DNESRS unit tasked with monitoring the implementation of the National Strategy on Higher Education (DNESRS) as well as the units in charge of planning and QA will be strengthened. Following the approval of a law/decreed on QA, it is expected that the QA unit will be given semi-autonomous status, to give QA related interventions greater credibility.

28. The project will also support investments in a system-wide ICT network to fill gaps in existing support, and provide funds to connect the country's tertiary education system to the West and Central African Research and Education Network (WACREN) to maximize benefits associated with services provided under the leadership of the Association of African Universities (AAU).<sup>16</sup> An improved system of ICT will support the development of teaching, learning and research, by boosting access to information *inter alia* through access to online libraries, science and research databases and e-learning resources for teachers and students. Critical for the effective implementation of the ICT network will be the development of capacity to manage and service the system, and training for members of the university community to make the best use of new resources.

29. A study for the development of the SIGES of the broad education sector (general and higher education) was completed in 2011. The study articulated design specifications of desired Information Systems for the Ministry of Education and the MoHE. This component will support the implementation of the SIGES. The technical management of activities related to MIS, the

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<sup>16</sup> WACREN is part of the National Research and Education Networks (NREN) whose aim is to facilitate knowledge sharing and to enhance data collection.



virtual library, online courses, and all other activities that require information technology (IT) infrastructure will be aggregated within the newly established IT Management Center (*Centre de Ressources Informatiques*) which will serve as a shared resource center for the entire system, including public and private HEIs. This approach will allow for the more efficient use of limited resources, maximize capacity for the implementation and management of ICT systems, and facilitate the integration of existing ICT centers within HEIs.

30. Finally, through this sub-component, the project will advance innovation in support of the development and expansion of private HEIs to enable their full potential (in terms of quantity, quality and relevance), in alignment with the public sector. TA will be supported through IDA-IFC collaboration, and its recommendations will inform the development of the higher education sector plan, and the regulatory framework for the expansion of private HEIs in programs relevant for the economy.

31. **Key activities:** The following main activities will be supported by the project:

(a) Upgrading of the DNEsRS: In order to fulfill its mandate, the DNEsRS will need additional staff and funding to cover operational costs (to be provided by the Government). The project will complement these efforts by financing the building of new premises, and the procurement of new office furniture, IT equipment and the provision of staff training. The project will directly contract with the ENI and the ESIAU, to design the DNEsRS new building and the new animal health faculty in UOS, as well as for oversight of the civil work associated with UOS construction.

(b) Support to the Planning and Prospective Unit (PPU) and the development of the sub-sector plan. The project will finance the procurement of equipment, furniture, relevant consultants and the training of staff from the PPU and HEIs to enable the production of annual statistics range needed indicators with regard to enrolment, graduates, staff, facilities, etc. in coordination with the MIS, as well as the tracer studies. The PPU is expected to assist HEIs not participating from component 1 in the development and monitoring of their respective five-year IDPs. The NICHE project will finance the development of a template and manual of procedures for HEI, business plans, prepare an implementation plan and train focal points in each HEI. The HESP will finance additional TA as needed, background and tracer studies, and consultant services and workshops for the preparation of the sector medium term development plan and annual reports.

(c) Support to the Quality Assurance (QA) Unit. The project will finance consultant services and workshops to promote and facilitate the implementation of QA in HEIs, assist selected academic units to undertake self-assessments, and guide the implementation of the LMD system. The project will also support the procurement of equipment and furniture for the QA Unit.

(d) Management and Information System (MIS). The following activities will be financed in relation to the SIGES and as an integral part of the WACREN: (i) Design of the SIGES: The project complement existing interventions through the financing of TA premised on enhancing the design of the MIS and upgrading software, based on the specifications outlined in the 2011 preliminary study (updated to take into account

needs identified by NICHE). This will include the development of a standard MIS for HEIs (accounting, budgeting, academic and students' management, facilities management, etc.) and a central database at the MoHE level. (ii) Implementation of the SIGES at institutional level. The project will finance the procurement of IT equipment, consultancy services and training of staff for the deployment of the system in HEIs under the leadership of the MoHE. (iii) Implementation of the SIGES at the central level. The implementation of the SIGES at the HEI level will enable the production of basic data and indicators to feed the MoHE central database for monitoring and planning purposes. The project will also finance IT equipment, consultant services and training for the implementation of the SIGES at the MoHE level.

(e) Virtual library and upgrading libraries. The UNESCO PACTICE project will finance the virtual library. However, the HESP will finance the acquisition of eBooks and complementary equipment for HEIs. The project will also finance the development of three videoconferencing rooms (two in the center which hosts the Resource Center (*Centre de Ressources*), and one in the new DNESRS).

(f) Development of Private Sector Providers. The project will finance several studies and related consultancy services to support the development and expansion of private HEIs. This will include, *inter alia*, a study of factors constraining private HEI development; an analysis of the status and challenges to the provision of private higher education in Mali; recommendations to enhance the contribution of the private sector; and an investigation of financing alternatives for private HEIs with local banks (in collaboration with the IFC), as well as a study on student loans. The unit responsible for private HEIs within the Ministry will also be strengthened through TA and the upgrading of equipment to better articulate the government strategy for higher education and private HEIs.

**Beneficiaries:** Component 1 is focused on selected HEIs; Component 2 will support broader initiatives benefitting the central level and all HEIs (public and private).

32. **Implementation arrangements:** under the leadership of the PIU coordinator and the head of the DNESRS, the coordinator of Component 2 will monitor and facilitate the daily implementation of activities under this component, with the head of the private HEIs within the ministry playing a leading role in monitoring activities related to the private sector. All fiduciary responsibilities associated with these actions will be vested in the PIU.

### **Component 3: Project Management and Technical Assistance (US\$3 million)**

33. Component 3 will fund activities associated with project management, and TA (with regard to fiduciary issues, as well as studies and analytical work). The project will finance studies contributing to the improvement of M&E in the higher education sector as well the design of a new sector plan integrating a financing system that incentivizes a more competitive higher education system. Financed studies will include: background studies towards the development of the sector program (financed under component 2); annual higher education reports; a study of potential financing mechanisms; and an assessment of the implementation of new programs, including those developed with the support of ECOWAS.

34. Component 3 will, moreover, finance exchange programs for representatives of public HEIs with internationally-renowned institutions of higher learning, visiting teaching missions from the Malian diaspora, and innovation to promote learning outcomes, academic excellence and responsiveness to market demand. Particular attention will be placed on the procurement of international TA to assist selected HEIs develop best practices in their business plans. The TA sub-component will finance the provision of higher education services to institutions not supported in Component 1 from some of the 19 Africa Centers of Excellence in West and Central Africa. These Centers of Excellence, focused on science, technology, engineering, mathematics, health and agricultural sciences, are supported by a Bank-supported regional project. Malian institutions will define their needs and competitively purchase support packages that may include short-term specialized training, longer-term faculty development, the sponsoring of visiting faculty, and curriculum design and development.

35. The PIU will be responsible for daily management, implementation, administration, overall project coordination, and the M&E of the project.

## Annex 3: Implementation Arrangements

### Republic of Mali: Higher Education Support Project

#### Project Institutional and Implementation Arrangements

1. The Ministry of Higher Education and Scientific Research (MoHE) is the project implementing agency and will have overall responsibility and accountability for project coordination and implementation.

#### *Project administration mechanisms*

2. ***The Council of Cabinet (Conseil de Cabinet) of the MoHE is the Project Steering Committee (PSC).*** The project will be aligned to this existing body to ensure synergy with existing programs and coherence with the National Policy on Tertiary Education and the government sub-sector priorities. The PSC is the main decision-making body for the project. Its main role is to provide guidance and overall supervision of the project, and facilitate implementation by addressing any issues that may arise which may prevent timely implementation of the project. It is chaired by the Minister in charge of the MoHE or his/her designee, and it comprises all Rectors, Directors of the *Grandes Ecoles*, and Directors of central units of the MoHE, including the Director General in charge of Higher Education (DNESRS), and the Secretary General of the Ministry. The PSC will meet twice yearly to review and approve the annual work plans, budget, monitoring reports and studies prepared under the project. In addition, it will propose solutions for identified problems and decide on the project's strategic direction. The project coordinator will represent the project and will be a member of the Council of Cabinet to which it will report on progress and seek guidance once every three months (Council meetings are held on a weekly basis).

3. ***The Project Technical Committee (PTC)*** will be chaired by the Director General in charge of Higher Education of the MoHE. It will meet bi-monthly to review the annual work plan, monitor problems and provide solutions. The PTC will include the coordinator, heads of the Planning, Quality Assurance, and Private Sector Units in the Ministry as well as the project technical coordinators and other members of the PIU, including a representative from the Ministry of Mines. As the need arises, other staff of HEIs or units outside the MoHE will be invited for a specific meeting.

4. ***Implementation agency.*** As the project implementing agency, the MoHE will have overall responsibility for project coordination and implementation. The Ministry has appointed a Project coordinator and other key members of the PIU who are civil servants from key units of the ministry. The PIU will consist of a project coordinator, an accountant, a finance officer, a procurement specialist and a procurement officer, a communications officer, coordinator of component 1 (from the QA unit of the MoHE), coordinator of component 2 and an M&E specialist, both from the planning unit. Both the component 2 coordinator and the M&E specialist will facilitate implementation of specific sub-components and major project activities, and support staff. In addition, the project will make provision for the technical coordinator of the Resource Center which hosts the database and the Information and communications Technology (ICT) infrastructure of the sub-sector. The representative appointed by the Minister of Mines will

also be part of the PIU as he will manage sub-component 2.3 under the coordination of the coordinator with fiduciary support of the PIU. The accounting and procurement staff are from the Direction of Financial Services (DAF) of the MoHE to which they will be back after the project. Thus the project will build the capacity of the DAF in project management, procurement and FM. The PIU is responsible for procurement and project FM, preparing annual work plans, quarterly and annual implementation and results reports, monitoring overall project implementation and ensuring compliance with safeguard policies. Project funds will pay part of the PIU civil servants' top-up bonus to be linked to staff performance to be assessed every six months. The PIU's responsibilities will include:

- (a) Procurement and project FM;
- (b) Implementation of a communication program to inform the public of project activities and obtain feedback;
- (c) Consolidation of annual work plans of the three project components, including environmental and social management measures, into an annual work plan for the project as a whole, to be submitted to the PSC and the MoHE for final approval;
- (d) Preparation of quarterly progress reports on implementation and results to be discussed in the Council of Cabinet meeting of the MoHE (*Conseil de Cabinet*);
- (e) Preparation of semiannual progress reports on implementation and results to be discussed by the Project Steering Committee;
- (f) Preparation of annual progress reports on implementation and results, including financial report linked to results and indicators to be circulated by **March 31** each year;
- (g) Monitoring the overall project implementation and its adherence to the project objectives; and
- (h) Ensuring compliance with safeguard policies.

#### *Project administration mechanisms*

5. The project implementation documents will contain the required preparation and implementation conditions and specify in detail the requirements for effective and transparent implementation and disbursement. Detailed project implementation arrangements will be provided in the POM which contains the following: (a) the Project Procedures Manual (b) the Project Procurement Manual (PPM); and (c) the Project Financial Management Manual (PFMM). All manuals will be discussed and submitted to IDA and agreed upon before effectiveness. Training of all staff involved in project implementation on each of the manuals (as necessary) will take place at the beginning of the project.

6. **Higher Education Institutions** (HEIs) are major actors involved in the implementation of the HESP. One of the main objectives of the project is to build their governance and management structures and capacity to deliver relevant and strong programs. Selected HEIs' heads and vice-directors are members of the PSC and the PTC, respectively. HEIs will be involved in preparing TORs and technical specifications of studies and purchase of equipment

for central units in order to ensure compatibility with the existing ones. Selected HEIs have also appointed PADES focal points to ensure good links between the PIU and MoHE and activities at the institutional level.

7. ***National Directorate of Higher Education and Scientific Research (DNESRS).*** In order to manage the reforms on autonomy and governance, the Government has established the DNESRS whose functions will include promoting quality assurance, ensuring policy and planning activities, and providing sector statistics. The project will support the development of the technical capacities of the DNESRS. The DNESRS will play a leading role in implementing project activities related to QA, teacher training policy and planning. It will be responsible for drafting or reviewing TORs for studies, helping in the selection of activities and consultants to undertake technical assistance, organizing workshops for HEIs business planning, teacher training, training of Boards of Directors, and developing the sector plan.

8. ***Implementing support - Component Coordinators:*** For each of the main Components and Sub-components, there is a technical coordinator whose role is to coordinate activities between the MoHE, PIU and HEIs. Essentially, these coordinators will keep their counterparts in the HEIs informed of project activities, develop important documents and programs with them, share information and monitor project activities. It is estimated that with this structure of technical coordinators and networks over 100 staff from HEIs and the MoHE will be involved in the implementation of the project, thus facilitating information exchange and buy-in to project activities.

## **Financial Management, Disbursements and Procurement**

### *Financial Management*

9. ***Staffing and Training:*** The Project FM staffing will mainly consist of an FM officer and an accountant both of whom will be civil servants. Due to lack of adequate previous experience of Bank-financed operations, the project FM team will receive technical support from the FM officer of the Ministry of Basic Education who is a seasoned FM specialist familiar with Bank procedures.

10. ***Budgeting arrangements:*** The Project budgeting process will follow Bank procedures and be clearly defined in the Budget section of the FM procedures of the operational manual. The budget will be adopted before the beginning of the year and monitored through the project accounting software. Annual draft budgets will be submitted to the Bank's formal non-objection before implementation. The consolidated Annual Work Plan and Budget will be reviewed by the Bank technical team and approved by the Council of Cabinet and submitted to the Bank for a formal No Objection no later than November 30 of every year.

11. ***Accounting policies and procedures:*** Project accounts will be maintained and supported with appropriate records and procedures to track commitments and to safeguard assets. Annual financial statements will be prepared by the FM team of the PIU by using appropriate accounting software to generate automatically acceptable interim financial reports (IFRs) and financial statements. The accounting policies and procedures will be documented in the accounting procedures. The project, through its administrative and financial management units, will apply

OHADA (*Organisation pour l'Harmonisation en Afrique du Droit des Affaires*) accounting principles.

12. **Internal controls and internal audit:** For the proposed project, the existing operational manual pertaining to the previous HE Project will be updated to take into account the new Project technical specificities and design. To maintain a comprehensive control environment, the project team is expected to follow the control mechanisms that will be described in the manual of procedures. The manual will ensure that adequate internal controls are in place for the preparation, approval and recording of transactions as well as segregation of duties; it will be subject to updates as needed. As the Project design will include a DLI mechanism, an internal auditor will be recruited to conduct ex post reviews of the Project transactions and team up with an external DLI verifier who will be recruited by the PIU as well.

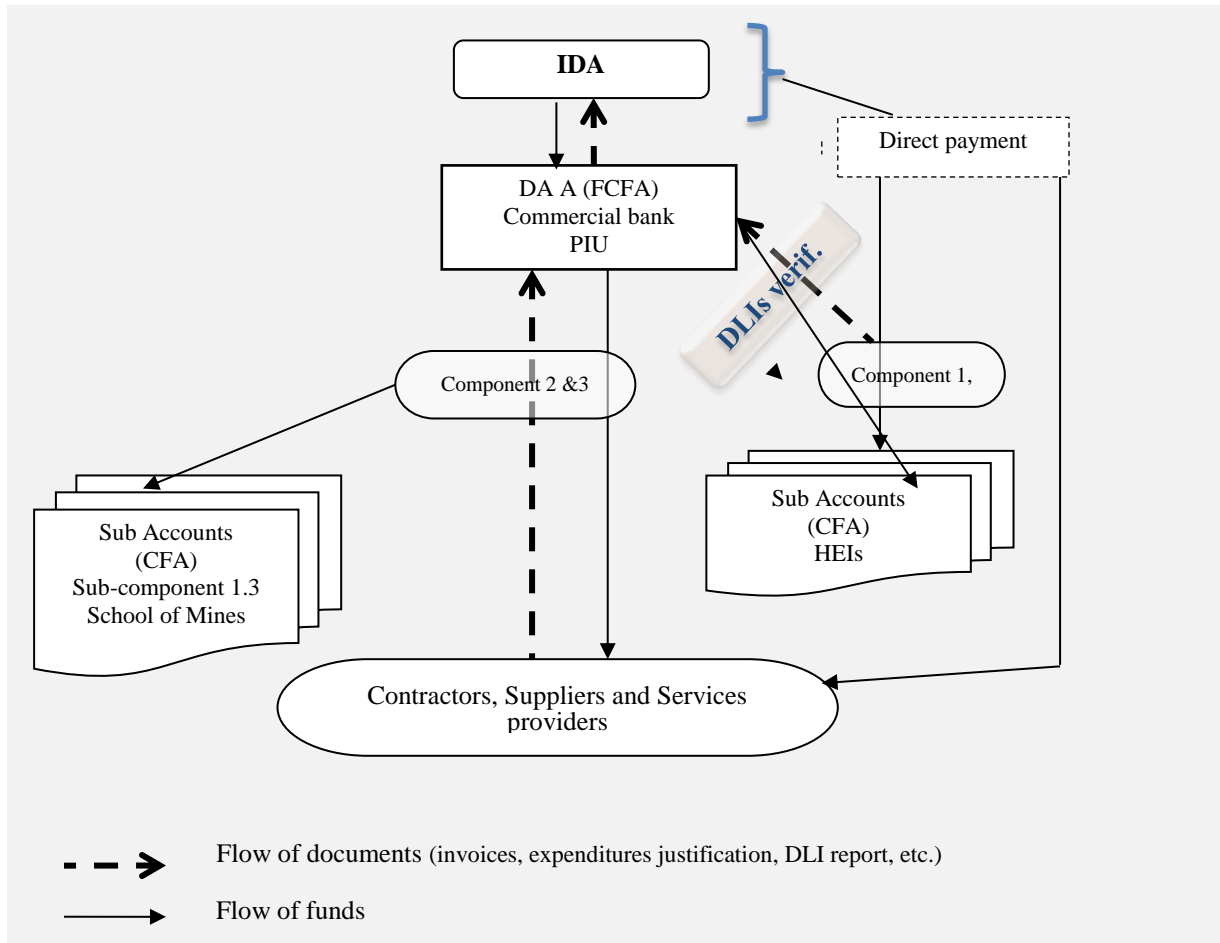
13. **Reporting and Monitoring:** The PIU will prepare quarterly IFRs during project implementation encompassing all components. The Interim unaudited Financial Reporting (IFR) includes the following statements: (i) Statement of Sources of Funds and Project Revenues and Utilization of funds; (ii) Statement of Expenditures (SOE) classified by project components/activities (economic classification) showing comparisons with budgets for the reporting period and cumulative for the project life; and (iii) Note to the IFR providing reasons for the variances and any information on the statement of sources of funds and project revenues and utilization of funds.

14. Annual financial statements will be prepared by the PIU and will be subject to annual external audits. Such Financial Statements will comply with SYSCOHADA and World Bank requirements and will be comprised of:

- A Statement of Sources and Uses of Funds which includes all cash receipts, cash payments and cash balances;
- A Statement of Commitments;
- Accounting Policies Adopted and Explanatory Notes; and
- A Management Assertion that project funds have been expended for the intended purposes as specified in the relevant financing agreements.

15. **Flow of funds:** One Designated Account (DA) in FCFA will be opened in a reputable and acceptable commercial bank and managed by the PIU according to the disbursement procedures described in the Administrative, Accounting and Financial procedures and the Disbursement Letter (DL). Funds will therefore flow from the DA to suppliers and contractors. All expenses, including taxes, will be financed 100 percent by the project. Activities, especially under Sub-Component 1.1, will have the option of having payments transferred directly from the IDA financing account to the HEIs sub account upon completion of agreed results. HEIs and the Ministry of Mines will open dedicated accounts to receive project funds provided achievement of specified indicators. Unused funds by selected HEIs may be given to other public HEIs based on verified achievement of results monitored in the results framework. The sub-account of the Ministry of Mines dedicated to sub-component 1.3 will be managed under the responsibility of the PIU.

**Figure 3.1: The project flow of funds diagram**



***Audit arrangements***

16. The Financing Agreement (FA) will require the submission of Audited Financial Statements for the project to IDA within six months after year-end. The auditor will conduct an annual audit of the annual financial statements. A single opinion on the Audited Project Financial Statements in compliance with International Standards on Auditing (ISA) will be required. The external auditors will prepare a Management Letter giving observations and comments, and providing recommendations for improvements in small grant management, accounting records, systems, controls and compliance with financial covenants in the Financial Agreement.



**Table 3.1: Major weaknesses and FM Action Plan to reinforce the control environment**

<b>Significant Weaknesses or risks</b>	<b>Action</b>	<b>Responsible body</b>	<b>Due date</b>
Existing FM manual does not encompass new project design	1- Update the FM procedures as part of the Project operational manual including internal controls, budget process, assets safeguards, and description of roles and responsibilities of all stakeholders	MoHE/PIU	Before effectiveness
The accounting and reporting requirement might not be fulfilled	2- Customize the accounting software to the Project specificities	MoHE/PIU	Within two months after effectiveness
Weak internal control environment and lack of an internal audit function	3- Appoint an internal auditor	MoHE/PIU	Within four months after effectiveness
Lack of adequate capacity of the Chamber of Accounts of the Supreme Court	4- Recruit an external auditor with ToR acceptable to the Bank	MoHE/PIU	Within five months after effectiveness

#### 17. **Financial Covenants**

- a) A financial management system including records, accounts and preparation of related financial statements shall be maintained in accordance with accounting standards acceptable to the Bank.
- b) The Financial statements will be audited in accordance with international auditing standards. The Audited Financial Statements for each period shall be furnished to the Association not later than six (6) months after the end of the project fiscal year. The Borrower shall therefore recruit an external auditor not later than five (5) months of effectiveness
- c) The Borrower shall prepare and furnish to the Association not later than 45 days after the end of each calendar quarter, interim un-audited financial reports for the Project, in form and substance satisfactory to the Association

#### ***Conclusion of the FM assessment***

18. The FM residual risk at preparation is **Substantial**. It is nevertheless considered that the proposed FM arrangements for the project will satisfy the requirements under Bank OP 10.00 requirements once the mitigation measures are implemented. The implementing entity will ensure that the Bank's Guidelines: *Preventing and Combating Fraud and Corruption in Projects financed by IBRD Loans and IDA Credits and Grants* (revised January 2011) are followed under the project.

19. ***Disbursement arrangements***. Disbursement will be made through the DA in accordance with the *World Bank Disbursement Guidelines for Projects* dated May 2006. This operation will

follow transaction based disbursement for all components except component 1.1 as detailed below.

**20. Disbursements under Disbursement-Linked Indicators Sub-component.** Disbursements under, Sub-Component 1.1 will be made upon satisfactory evidence of achievement of specified DLIs. Funds will be disbursed annually to the bank accounts of the four selected HEIs conditional on satisfactory achievement of DLIs. Achievement will be assessed through a DLI achievement assessment report provided by the Quality Assurance department of the Ministry (on the basis of the DLIs monitoring protocol). A report documenting eligible expenditures (“Eligible Expenditures Program Spending and Assessment Report”) will be provided to the Association along with each application for withdrawal under component 1.1. The DLIs will be applied, following an IDA No Objection on the assessment report, against reimbursement of non-procurable expenditures line items related to salaries and additional teaching hours up to an aggregated amount not exceeding the total of the annual amount indicated for DLIs of each HEI. The PIU will recruit a consultant with a strong education background and audit skills to perform a review of the assessment report prior to the payment.

**21. Disbursements under Non-DLI component.** Disbursement procedures will be detailed in the accounting, administrative and financial procedures and the disbursement letters. Upon project effectiveness, transaction-based disbursements will be used for Sub-components 1.2, 1.3, and components 2 and 3. An initial advance up to the ceiling of the DA (FCFA 1,000,000,000) and representing 4 months forecasted project expenditures paid through the DA will be made into the Designated Account and subsequent disbursements will be made on a monthly basis against submission of SOE or records as specified in the Disbursement Letter (DL). In addition to the “advance” method, the option of disbursing the funds through direct payments to a third party, for contracts above a pre-determined threshold for eligible expenditures (e.g. 20 percent of the DA ceiling), will also be available for the DA. Another acceptable method of withdrawing proceeds from the IDA grant is the special commitment method whereby IDA may pay amounts to a third party for eligible expenditures to be paid by the Recipient under an irrevocable Letter of Credit (LC).

#### *Procurement*

22. The Procurement arrangements for the project have been designed with consideration of the weakness of national procurement rules and procedures, and past experience in procurement carried out under other Bank financed projects.

#### *Reference to National Procurement Regulatory Framework*

23. A Country Procurement Assessment Review (CPAR) for Mali was carried out in 2007 and an evaluation of the national procurement system based on OECD/DAC methodology was done in September 2011 under EU funding. The assessment of the procurement regulation highlighted that the existing procurement principles and most of the procedures needed to be strengthened. The current regulation on Public Procurement in Mali is the Decree No. 08-045/P-RM dated August 11, 2008.

24. The focus has progressively shifted from reforming the legal and regulatory framework to focusing on strengthening the procurement capacity and the transparency of the national procurement system. In this regard, the Government has taken the following steps: (i) adopted an action plan based on the finding of the CPAR; (ii) set up a new legal and regulatory framework under the new Procurement Code; (iii) issued procurement regulations and standard bidding documents; and (iv) created a Regulatory body for public procurement and established procurement units in regions and technical ministries, including the Ministry of Finance.

25. In 2013, under the initiative of the WAEMU Commission, the Bank funded a study on how to boost budget execution for a greater development impact. Based on data suggesting that a significant part of the capital investment budgets of WAEMU member states is underspent, this study was undertaken with a view to providing a comprehensive review of the systems, processes and practices used by Finance and Procurement to manage capital expenditure and to identifying practical recommendations that would allow countries to enhance the levels of budget execution. The country report of Mali recommended a series of actions in order to reduce the huge delays of procurement process in Mali and to improve value for money. The actions plan of this study at the regional level was approved on February 28, 2014 at the meeting of the “*Comité d’Experts*” (Experts Committee) of the WAEMU held in Burkina Faso. Mali had implemented some of the measures of the action plan before its approval by the Council of Ministers of WAEMU in their meeting on June 28, 2014 in Dakar.

26. A Prime Ministerial Decree was issued on April 10, 2014 and designates authorities in charge of conclusion and approval of contracts; it also raises the threshold for concluding and approving all the authorities. This contributes in theory in reducing the time of the procurement cycle of a number of contracts (Decree No. 2014-0256/PM-RM). A ministerial decree of April 25, 2014, significantly raised the threshold for concluding and approving contracts and reduces the time the different stages of the cycle of procurement and, it also removes the double review Government / donors for contracts subject to prior review donor (Decree No. 2014-1323 / MEF-SG). These different measures aim to reduce the duration of procurement cycle and to help boost the budget execution.

27. National Competitive Bidding (NCB) will be acceptable to the Bank subject to the procedures below and as reflected in the Financing Agreement.

- (a) **Using of competitive method:** Even though the National Procurement Code does not apply to some small contracts, the procedures will require that for such contracts, a competitive method be used;
- (b) **Advertising:** The General Procurement Notice would be advertised in the United Nations Development Business (UNDB) online and on the Bank’s external website, specific invitation to bids would be advertised in at least one national widely circulated newspapers or on a widely used website or electronic portal of the Recipient with free national and international access;

- (c) **Standard Bidding Documents:** All standard bidding documents to be used for the Project shall be found acceptable to the Association before their use during the implementation of the Project;
- (d) **Eligibility:** No restriction based on nationality of bidder and/or origin of goods shall apply. Foreign bidders shall be allowed to participate in NCB without restriction and shall not be subject to any unjustified requirement which will affect their ability to participate in the bidding process. Recipient's government-owned enterprises or institutions shall be eligible to participate in the bidding process only if they can establish that they are legally and financially autonomous, operate under commercial law, and are not dependent agencies of the Recipient;
- (e) **Bid preparation:** Bidders shall be given at least thirty (30) days from the date of the invitation to bid or the date of availability of bidding documents, whichever is later, to prepare and submit bids, except in cases of emergency declared by the Recipient, and provided that such emergency is recognized by the Association and the Association has given its approval for less time for the bids submission;
- (f) **Bid Evaluation and Contract Award:** the evaluation and contract award process of alternative bids would be revised according to Bank's Procurement guidelines. The criteria for bid evaluation and contract award conditions shall be clearly specified in the bidding documents;
- (g) **Preferences:** No domestic preference shall be given to domestic/ West African Economic and Monetary Union (WAEMU) countries bidders; to domestically/WAEMU area manufactured goods; and to bidders forming a joint venture with a national firm or proposing national sub-contractors or carrying out economic activities in the territory of the Recipient;
- (h) **Fraud and Corruption:** In accordance with the Procurement Guidelines, each bidding document and contract shall include provisions stating the World Bank's policy to sanction firms or individuals found to have engaged in fraud and corruption as set forth in the paragraph 1.16 (a) of the Procurement Guidelines.
- (i) **Right to Inspect and Audit:** In accordance with paragraph 1.16 (e) of the Procurement Guidelines, each bidding document and contract financed from the proceeds of the financing shall provide that: (i) the bidders, suppliers, and contractor and their subcontractors agents, personnel, consultants, service providers or suppliers, shall permit the Association, at its request, to inspect their accounts, records and other documents relating to the submission of bids and contract performance, and to have them audited by auditors appointed by the Association; and (ii) the deliberate and material violation by the bidder, supplier, contractor or subcontractor of such provision may amount to obstructive practice as defined in paragraph 1.16 (a) (v) of the Procurement Guidelines.

- (j) **Suspension and debarment:** The cases of suspension/debarment under the Recipient system shall result from fraud and corruption as set forth in paragraph 1.16 (a) of the Procurement Guidelines and approved by the Association provided that the particular suspension/debarment procedure was afforded due process and that the suspension/debarment decision is final.

### **Use of Bank Guidelines**

28. Procurement for the proposed Project would be carried out in accordance with the World Bank's "*Guidelines: Procurement under IBRD Loans and IDA Credits*" dated January 2011 and revised in July, 2014; and "*Guidelines: Selection and Employment of Consultants by World Bank Borrowers*" dated January 2011 and revised in July, 2014, and the provisions stipulated in the Financing Agreement. In addition to complying with IDA's Guidelines, procurement will also comply with the Mali Public Procurement Decree. However, in the event of a conflict between IDA Guidelines and the Procurement Decree, the regulations of the World Bank will prevail. The various items under different expenditure categories are described in general below. For each contract to be financed by the Grant/Credit, the different procurement methods or consultant selection methods, the need for pre-qualification, estimated costs, prior review requirements, and time frame are agreed between the Borrower and the Bank in the Procurement Plan (PP) use to be prepared and agreed during negotiations. The PP will be updated at least annually, or as required, to reflect the actual project implementation needs and institutional capacity. The implementation entities, as well as contractors, suppliers and consultants will observe the highest standard of ethics during procurement and execution of contracts financed under this project. "Guidelines on preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA and Grants" dated October 15, 2006 and revised in January 2011 (the Anti-Corruption Guidelines) shall apply to the project.

### **Advertising**

29. A General Procurement Notice (GPN) will be prepared and published in United Nations Development Business (UNDB) online and on the Bank's external website and in at least one national widely circulated newspapers or on a widely used website or electronic portal of the Recipient with free national and international access after the project is approved by the Bank Board, and/or before effectiveness. The GPN will show all International Competitive Bidding for works and goods contracts and all consulting services involving international firms. Specific Procurement Notices for all goods and works to be procured under ICB and Expressions of Interest (EoIs) for all consulting services to cost the equivalent of US\$200,000 and above would also be published in the same manner that the GPN.

## **Procurement methods**

**Sub-Components 1.2, 1.3, and Components 2 and 3 are those concerned with procurement activities.**

### **Procurement of Goods, Works and Non-consulting services:**

#### ***Under Sub-Component 1.2***

30. The project will finance civil works, equipment, goods and TA required to setting up a modern functional facility for the UOS.

#### ***Under Component 2***

31. Key Activities under this component include construction of the *Direction Nationale de l'Enseignement Supérieur et de la Recherche Scientifique* (DNESRS), acquisition of equipment and software, purchase of books and electronic database for virtual library, vehicles for central units newly established as well as cost related to networking with universities members of the ACE Project. Main offices of the units in charge of Planning and QA will be built with project financing. The project will finance costs for equipment, furniture, needed to establish the Planning unit to produce annual statistics on higher education, undertake background studies, including sector expenditures, financing and performance and lead the development of a tracker study, and assist HEIs in monitoring their respective five-year business plans. The project will also support investments in a system-wide ICT network to complement and fill in existing gaps in needed supports for the system. The project will complement the effort of staffing by financing building of new premises, office furniture and IT equipment. The project will finance additional software, based on the specifications defined by the 2011 preliminary study updated to take into account needs identified by NICHE. The project will finance the development of three videoconferencing rooms (two in the center which hosts the *Centre de Ressources*, and one in the new DGESRS).

#### ***Under Component 3***

32. The project will finance equipment, rent, operation and maintenance; office materials and supplies (stationary and other consumables); lease of vehicles, operation, maintenance and repair; and travel cost and transport of the staff associated with project implementation.

33. Procurement will be done under ICB or Limited International Bidding (LIB), or National Competitive Bidding (NCB) using the Bank's Standard Bidding Documents for all ICB and National Standard Bidding agreed with or satisfactory to the Bank. Shopping in accordance with paragraph 3.5 of the Procurement Guidelines will be used for procuring readily available off-the-shelf goods of values not exceeding US\$100,000; and for simple civil works not exceeding US\$ 200,000. Direct contracting may be used where necessary if agreed in the PP in accordance with the provisions of paragraph 3.7 to 3.8 of the Procurement Guidelines.

### **Selection and employment of Consultants:**

#### ***Under Sub-Components 1.2, 1.3 of Component 1***

34. Activities under these sub-components include consultants to be hired for the development and oversight of the department of livestock of UOS; as well as feasibility studies, architectural plans, curriculum and program development and equipment specifications for the new proposed school for the Bamako Africa School of Mines. The project will directly contract with the ENI and the *Ecole Supérieure Internationale d'Architecture et d'Urbanisme* (ESIAU) a private higher education school which has been awarded an international architecture prize, to conduct the design of the new Department of Livestock of UOS.

#### ***Under Component 2***

35. Key Activities under this component include hiring consultants for various tasks, training, training teachers as well as cost related to networking with universities members of the ACE Project.

36. The project will finance costs of consultant and training services needed to establish the Planning Unit to produce annual statistics on higher education, undertake background studies, including sector expenditures, financing and performance and lead the development of a tracer study, and assist HEIs in monitoring their respective five-year business plans. The project will directly contract with ENI and ESIAU to conduct the design of the new building of the DGESRS and oversight the civil work.

37. The project will complement the effort of staffing by financing staff training. The IDA project will finance background studies, consultant services and workshops needed for the preparation of the sector medium term development plan, and annual reports. The project will finance consultant services to promote and facilitate the implementation of QA in HEIs, and to assist selected academic units in undertaking self-assessments and guide implementation of the LMD system. The project will finance TA to complement activities financed by the Netherlands NICHE Project; in particular enhanced design, based on the specifications defined by the 2011 preliminary study updated to take into account needs identified by NICHE. The project will finance consultancy services related to IT equipment and staff training for the deployment of the HEIs under the leadership of the MoHE. The project will also finance consultant services and training needed for the implementation of the SIGES at the MoHE level.

#### ***Under Component 3***

38. This component will fund required TA as well as studies and other analytical work needed, such as a tracer study to be conducted three times during project implementation to monitor the extent to which graduates from licensed programs have been employed or are self-employed. In addition, the component will finance exchange programs with internationally-renown institutions of higher learning as well as visiting teaching missions from the Malian

diaspora, and innovations that bring about better learning outcomes, academic excellence and responsiveness to market demand. The project will finance various studies contributing to improved M&E of higher education including: background studies to develop the sector program (financed under sub-component 2.1), the annual higher education report, and the assessment of the implementation of new programs including those developed with WAEMU support.

39. There will be an allocation for TA to help the Ministry to conduct studies such as labor market studies to help the ministry and institutions make the right decisions on the relevant programs. The TA sub-component will finance provision of higher education services to those institutions not supported in component 1 from the 19 Africa Centers of Excellence in West and Central Africa. These Centers of Excellences within Science, Technology, Engineering and Math, Health and Agriculture sciences are supported by a Bank-supported regional project. Malian institutions would define their needs and competitively purchase support packages that could include short-term specialized training, longer term faculty development, visiting faculty, and curriculum development. The project will also finance the financial audits of the project.

40. The selection method will be Quality- and Cost-Based Selection (QCBS) method whenever possible. The following additional methods may be used where appropriate: Quality-Based Selection (QBS); Selection under a Fixed Budget (FBS); and Least-Cost Selection (LCS); Selection Based on Consultants' Qualifications (CQ), Single Source Selection (Firm and Individual) and Selection of Individual Consultants (IC).

41. Short lists of consultants for services estimated to cost less than the equivalent of US\$400,000 per contract for engineering and contract supervision and US\$200,000 per contract for other consultancy assignments may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines. However, if foreign firms express interest, they will not be excluded from consideration.

42. Single Source Selection (SSS) may be employed with prior approval of the Bank and will be in accordance with paragraphs 3.8 to 3.11 of the Consultant Guidelines. All services of Individual Consultants (IC) will be procured under contracts in accordance with the provisions of paragraphs 5.1 to 5.6 of the Guidelines.

### **Procurement Implementation Arrangements**

43. The Project will be implemented by the PIU set up by decision of the Minister of HE on November 10, 2014. The Project Management will be chosen from designated staff from the MoHE. In addition to the Coordinator, there will be an accountant, a finance officer, a procurement specialist and a procurement officer, a communications officer, coordinator of component 1 who is from the Quality Assurance Unit of the MoHE, coordinator of component 2, and an M&E specialist. All are civil servants. The PIU will be responsible for the daily management, implementation, administration, project coordination, and M&E of the project.

The procurement team main tasks will be: (i) preparing and/or submitting procurement documents which require World Bank review and/or clearance; (ii) contributing to the preparation of annual work plans and budgets, semi-annual and annual progress reports, mid-



term and completion review reports and (iii) updating and implementing the PP, and submitting to the World Bank.

**Procurement arrangements for Training and Workshops:**

44. For all training activities, the PIU shall prepare and submit for Bank approval, annual training plans and budgets which will include the objectives of the training, target participants, format of delivery and the qualifications of the resource person(s) as well as the expected impact of the training before the training can be undertaken. When the training is to be outsourced, the procurement of the trainer or the training institution shall be integrated into the project PP and agreed with the Bank. Similarly, the procurement of venues for workshops and training materials will be done by comparing at least three price quotations.

**Assessment of the capacity to implement procurement**

45. Procurement capacity assessment of the PIU was carried out to determine the institutional and management arrangements that would ensure proper execution of the project. They mainly focused on the capacity and internal arrangements of the recipient and the executing agency to carry out by themselves procurement planning and implementation, or otherwise proposed alternative arrangements to ensure transparent and efficient implementation.

46. *Assessment of the PIU:* A procurement assessment has been carried out on December 30, 2014, in the Project Implementation Unit set up by the Minister of Higher Education. Procurement issues and risks for the implementation of the project which have been identified include: (i) the absence of an operational manual of procedures within DFM; (ii) the lack of proficient procurement personnel to implement procurement actions in line with Bank procedures; (iii) the high level staff within the MoHE responsible for process control and approval are not familiar with Bank procurement procedures; (iv) the risk of exposure of the procurement specialists who are civil servants to the influence and pressure from their hierarchy; (v) the risk of staff moving to other positions in the public or private sectors after they have been well trained in procurement; (vi) the lack of a PP; and (vii) the lack of space dedicated adequate to the archives.

47. The overall unmitigated risk for procurement is “Substantial”. An action plan in order to have a “Moderate” residual risk has been designed to address the risks identified during the assessment and includes the following main actions in the following table:

**Table 3.2: Action Plan for Strengthening Procurement Capacity**

<b>Risk</b>	<b>Action</b>	<b>Responsibility</b>	<b>Due date</b>
<b>DFM-MFPE</b>			
1-Absence of a manual of procedures within DFM	Preparation of Project Operational Manual (POM) with section on procurement detailing out all applicable procedures, instructions and guidance for handling procurement	PIU	Before effectiveness
2- Lack of proficient procurement personnel to implement procurement actions in line with Bank procedures	Hands-on training and coaching through technical support from the procurement consultant from the Ministry of Basic Education who is a seasoned procurement specialist familiar with Bank procedures  Participation in procurement training workshops for mainstream procurement and technical staff at specialized procurement training institutions like ISADE, CESAG or IPC or any other acceptable institution to enhance their knowledge	PIU/Procurement consultant  PIU	Three months after effectiveness
3- High level staff within MoHE responsible for process control and approval are not familiar with Bank procurement procedures	Organize a workshop to update procurement staff on current changes in Bank procurement procedures and work closely with Bank PS  Hands-on training of identified high level staff within the MoHE on Bank procurement procedures  Capacity building for the all project staff involved in the procurement decision-making process and tender committee members, customized and hands-on training for the procurement staff on procurement focusing on: procurement planning, preparation of bidding documents, evaluation of bids or proposals, and procurement documents filing	PIU/IDA  Procurement Consultant/Procurement team of the project  PIU	Three months after effectiveness  No later than three months after effectiveness  Throughout the project life
4- Risk of exposure of the procurement specialists who are civil servants to the influence and pressure from their hierarchy	Complex contracts or high amounts contracts will be submitted to Bank prior review  The Control Body (DGMP) and the Regulation Authority (ARMDS) will have to play their role to ensure good governance and limit the opportunities for undue influence by anyone	IDA  DGMP-DS/ARM-DS	Throughout the project life  Throughout the project life
5- Inadequate communication and interaction between the	All interactions related to the procurement responsibility must be concordant with the institutional	PIU/HEIs	Throughout the project life

beneficiaries (HEIs) and the PIUPIU may lead to delays in the drafting of TORs or technical specifications and poor estimation of the costs	arrangements agreed on with the Borrower  Close monitoring of procurement plans on a monthly basis and closely monitor and exercise quality control on all aspects of the procurement process, including evaluation, selection and award.	PIU	Throughout the project life
6- Lack of Procurement Plan	Preparation of procurement plan for the first 18 months and agreed with the Bank and subsequently updating of procurement plans in tandem with annual work plan and budget and for agreed Contracts. The critical approval times will be reflected in the timelines of the procurement plans.	Project Coordinator	Plan was approved at negotiations
7- Lack of adequate space dedicated to the archives	Provision of adequate space and equipment for filing and archiving in order to better keep procurement documents and reports. Train staff responsible for the archives in data management.	Project Coordinator	No later than 3 months within the project effectiveness

48. **Operating Costs:** Operational costs means the incremental expenses incurred by the MoHE, based on the annual work plans and budget as approved by the Association, for Project implementation, management, and M&E, including reasonable costs for materials and supplies (but not the purchase of equipment), bank charges, communications, vehicle operation, maintenance, and insurance (but not the purchase of fuel), equipment maintenance, public awareness-related media expenses, travel and supervision, and salaries of contractual and temporary staff, and bonuses of members of the Borrower’s civil service. These items will be procured using the procedures detailed in the POM, which will be reviewed and found acceptable to IDA before credit effectiveness.

49. **Procurement Plans:** The Borrower will develop a PP indicating procurements to be carried out over the first 18 months of the project. The procurement plan, agreed between the borrower and the World Bank during negotiations, consists of the procurement methods or consultant selection methods, the need for pre-qualification, estimated costs, and prior review requirements. The procurement plan would be updated at least annually, or more frequently as required, to reflect the actual project implementation needs and improvements in institutional capacity.

50. **Prior-Review Thresholds:** The PP shall set forth those contracts which shall be subject to IDA Prior Review. All other contracts shall be subject to Post Review by IDA. However, relevant contracts below prior review thresholds listed below which are deemed complex and/or have significant risk levels will be prior-reviewed. Such contracts will also be identified in the PP. A summary of prior-review and procurement method thresholds for the project are indicated in the table below. All TORs for consultants’ services, regardless of contract value, shall also be subject to the prior review by IDA.

**Table 3.3: Thresholds for Procurement Methods**

<b>Expenditure Category</b>	<b>Contract Value (Threshold) (US\$)</b>	<b>Procurement Method</b>	<b>Contract Subject to Prior Review (US\$ 000)</b>
<b>1. Works</b>	15,000,000 or more	ICB	All
	Below 15,000,000	NCB	All except contracts below 10,000
	Below or equal to 200,000	Shopping	None unless contract specified in the PP
	No threshold	Direct Contracting	All except contracts below 100
<b>1. Goods and Non-consulting services</b>	3,000,000 or more	ICB	All
	Below 3,000,000	NCB	All except contracts below 500
	Below or equal to 100,000	Shopping	None unless contract specified in the PP
	No threshold	Direct Contracting	All except contracts below 100
<b>2. Consultancy</b>	Firms	QCBS, QBS, FBS, LCS, QC	All contracts of 200 and more and contracts specified in the PP
	Individual	IC (at least 3 CVs)	All except contracts below 200
	No threshold	Single Source	All except contracts below 100

**NB: All terms of reference for consulting services will be subject to IDA's prior review.**

### **Frequency of Procurement Supervision**

51. In addition to the prior review and supervision which is to be carried out by the Bank, the procurement capacity assessment recommends at least two supervision missions each year and also one visit to the field to carry out post-review of procurement actions.

52. **Post Review Procurement:** Post-reviews can be done either by IDA's specialists or by independent consultants hired under the IDA project according to procedures acceptable to the Bank to ascertain compliance with procurement procedures as defined in the legal documents. The procurement post-reviews should cover at least a 20 percent of contracts subject to post-review depending on the level risk. Post review consists of reviewing technical, financial and procurement reports carried out by the Recipient's executing agencies and/or consultants selected. Procurement performance will be assessed on an annual basis (in the form of procurement audits by an external agency). The threshold levels for various methods of procurement may be revised based on the assessment results.

## **Environmental and Social (including safeguards)**

53. The social impacts of the proposed project are expected to be positive. The project will improve the management of existing HEIs, which have not been effective over the past decade and put in place new programs with strong linkages to the needs of the economy, which will benefit youth in both the formal and informal sector including through more and better jobs. Teachers' unions and student unions have been involved in the design of the Government's program to give more autonomy to universities and their concerns have been integrated. The project which is mostly focusing on capacity building will have no land acquisition, or impact on resettlement.

54. The Mali HESP is classified as category B as none of its activities is expected to induce a negative impact on environmental resources and quality of life in the implementation areas. However, as the refurbishment of the construction of new premises for the DNESRS and the University of Segou could result in a production of solid waste, the Project Implementation Unit will ensure that: (i) a provision is included in each contract for an adequate waste collection and disposal by enterprises; and (ii) universities' budget entails some dedicated resources for waste management and sanitation. Any works/activities will be carried out in accordance with national and local laws and regulations.

55. A review of the institutional capacities of the implementing institutions revealed that there is a basic institutional and regulatory framework for waste management in Mali (Decree no. 01-394/P-RM of September 2001) enforced by the DNACPN and its decentralized units. Thus, almost all the major municipalities have set up a waste management system run in partnership with private sector and NGOs. Notwithstanding some difficulties in the collection of domestic and hazardous wastes, significant efforts are ongoing for the improvement of the sanitation of public areas.

56. Two safeguards policies are triggered if need arises: (i) Environmental Assessment OP/BP 4.01; and (ii) Involuntary Resettlement OP/BP 4.12. The existing ESMF and RPF of the Mali Emergency Education Project have been updated to serve as the safeguard management tools of the project. The revised ESMF and RPF were disclosed in-country on March 30, 2015 and by the Infoshop on April 2, 2015.

## **Monitoring & Evaluation**

57. **Results Framework:** A Results Framework (Annex 1) has been developed with the Government and describes the PDO and intermediate performance indicators to assess progress in achieving project development objectives. Baselines and targets values have been completed during appraisal.

58. **Monitoring and evaluation system:** The project will support the development of a computerized information management system-the SIGES, integrating university subsystems into a national higher education system providing timely data that is currently not available. The main outputs will be: (i) production of an annual statistical yearbook; and (ii) HEIs' IDP progress reports, which will include progress in implementing project activities at the HEI level, such as the introduction of new or renovated licensed programs and teacher training. The

Planning Unit of the DNESRS and the NICHE Project will work closely with each of the HEIs to develop templates, train staff in data collection, and validate and analyze data.

59. **Reporting:** The DNESRS will be responsible for preparing the annual statistical report summarizing major trends in the sector. HEIs will make annual reports on project activities benefiting their institutions based on their respective IDPs and agreed DLIs, in particular on the introduction of new programs, the teacher training activities, IT updates, and monitoring of business plans. The PIU will coordinate all reports and will be responsible for preparing: (i) quarterly project implementation reports; and (ii) a consolidated annual report of project activities and indicators, including financial report linked to results and indicators to be circulated by **March 31** each year. The PIU will contract a consultant to support the QA unit in conducting DLIs assessment and producing the annual report as part of the unit capacity building process.

60. **Studies and evaluations:** The DNESRS will be responsible for carrying out a number of studies on higher education financing, human resources, internal and external efficiency, tracer studies and employer surveys, among others. In particular, a tracer study will be undertaken at three points in time in the project (baseline survey to be set up during the first year of project implementation) to track: (i) youth satisfaction with the training received at the selected HEIs; and (ii) selected HEIs' graduates' labor market performance (placement rates and dynamics; employment sector; etc.) Additionally, an employer survey will also be undertaken at three points during the project implementation (baseline survey to be set up during the first year of project implementation) to track: (i) employers' satisfaction with the trainings offered by HEIs and/or performance of newly hired graduates; and (ii) emerging needs for skills in different sectors. While the employer survey will include all public and private formal sector employers and concern all HEIs, the project will more specifically monitor employers' opinions in the three priority sectors to measure its impact and fine-tune interventions. All the studies will also be used to develop a comprehensive Higher Education Sector Program and a second phase for investment in the sector. This sector program will be used by universities to orient their IDPs to improve quality and efficiency. Additional evaluations will include an assessment of the introduction of the 24 new programs, and the teacher training programs.

**Annex 4: Disbursement Linked Indicators and Results- Monitoring Protocol  
Republic of Mali: Higher Education Support Project**

	<b>Disbursement Linked Results (DLRs)</b>	<b>DLRY0 (to be assessed in March 2015)<sup>17</sup></b>	<b>DLRY1 (to be assessed in May 2016)</b>	<b>DLRY2 (to be assessed in May 2017)</b>	<b>DLRY3 (to be assessed in May 2018)</b>	<b>DLRY4 (to be assessed in May 2019)</b>
<b>DLI1 Improved Institutional Governance</b>	DLR1: Functional Board of Trustees (or University Council) of HEIs in place.	1 <sup>st</sup> Board of Trustees meeting that deliberates on the IDP, the MOP, the new academic programs, the budget, and other aspects of the management of the HEI	Two meetings of the Board of Trustees conducted that deliberate on the IDP, the MOP, the new academic programs, the budget, and other aspects of the management of the HEI	Two meetings of the Board of Trustees conducted that deliberate on the IDP, the MOP, the new academic programs, the budget, and other aspects of the management of the HEI	Two meetings of the Board of Trustees conducted that deliberate on the IDP, the MOP, the new academic programs, the budget, and other aspects of the management of the HEI	Two meetings of the Board of Trustees conducted that deliberate on the IDP, the MOP, the new academic programs, the budget, and other aspects of the management of the HEI
	Protocol for Monitoring DLR1	The HEIs will submit to the PIU the following documents: (i) documentation formalizing the appointment of Board members; (ii) a convocation Letter convening the Board meeting; (iii) copies of documents submitted to the Board; (iv) a list of attendance with signatures; (v) Board deliberations and approved minutes of the session; (vi) the rules of appointment and operation of the Board, and any official document related to the regulatory framework governing the Board. <u>The above-</u>	The HEIs will submit to the PIU the following documents: (i) documentation formalizing the appointment of Board members; (ii) a convocation Letter convening the Board meeting; (iii) copies of documents submitted to the Board; (iv) a list of attendance with signatures; (v) Board deliberations and approved minutes of the session; (vi) any revision that affects the Board operation adopted since May 1, 2015. <u>The above-mentioned documents must be received by the Bank before April</u>	The HEIs will submit to the PIU the following documents: (i) documentation formalizing the appointment of Board members; (ii) a convocation Letter convening the Board meeting; (iii) copies of documents submitted to the Board; (iv) a list of attendance with signatures; (v) Board deliberations and approved minutes of the session; (vi) any revision that affects the Board operation adopted since May 1, 2016. <u>The above-mentioned documents must be received by the Bank before April</u>	The HEIs will submit to the PIU the following documents: (i) documentation formalizing the appointment of Board members; (ii) a convocation Letter convening the Board meeting; (iii) copies of documents submitted to the Board; (iv) a list of attendance with signatures; (v) Board deliberations and approved minutes of the session; (vi) any revision that affects the Board operation adopted since May 1, 2017. <u>The above-mentioned documents must be received by</u>	The HEIs will submit to the PIU the following documents: (i) documentation formalizing the appointment of Board members; (ii) a convocation Letter convening the Board meeting; (iii) copies of documents submitted to the Board; (iv) a list of attendance with signatures; (v) Board deliberations and approved minutes of the session; (vi) any revision that affects the Board operation adopted since May 1, 2018. <u>The above-mentioned documents must be received by the Bank before April 30,</u>

<sup>17</sup> The indicators of Year 0 will be assessed globally, that is, they will all be achieved or not. Achieving all four results give an entitlement to an amount of US \$ 500,000 to each of the HEIs under the first year to be released in one tranche once the project goes into effectiveness. Further, the achievement of these results will entail the support of the project on the basis of established DLI for the next four years according to the targets agreed upon with each HEI.

		<p><u>mentioned documents must be received by the Bank before March 15, 2015.</u></p> <p>The Bank will consider the condition as having been met following the receipt, verification and approval of all the above-mentioned documents.</p>	<p><u>30, 2016.</u></p> <p>The Bank will consider the condition as having been met following the receipt, verification and approval of all the above-mentioned documents, as well as reaching the agreed target for the DLR of the year. <b><u>The project will release the agreed amount to the HEI before the end of June 2016.</u></b></p>	<p><u>30, 2017.</u></p> <p>The Bank will consider the condition as having been met following the receipt, verification and approval of all the above-mentioned documents, as well as reaching the agreed target for the DLR of the year. <b><u>The project will release the agreed amount to the HEI before the end of June 2017.</u></b></p>	<p><u>the Bank before April 30, 2018.</u></p> <p>The Bank will consider the condition as having been met following the receipt, verification and approval of all the above-mentioned documents, as well as reaching the agreed target for the DLR of the year. <b><u>The project will release the agreed amount to the HEI before the end of June 2018.</u></b></p>	<p><u>2019.</u></p> <p>The Bank will consider the condition as having been met following the receipt, verification and approval of all the above-mentioned documents, as well as reaching the agreed target for the DLR of the year. <b><u>The project will release the agreed amount to the HEI before the end of June 2019.</u></b></p>
	DLR 2: Adoption and implementation of management tools and procedures of HEIs.	Adoption of HEI management tools and procedures	Publication of statistics of the HEI and IMS reports; organizational and financial audit report; remedial measures proposed and validated and implementation report of the previous recommendations.	Publication of statistics of the HEI and IMS reports; organizational and financial audit report; remedial measures proposed and validated and implementation report of the previous recommendations.	Publication of statistics of the HEI and IMS reports; organizational and financial audit report; remedial measures proposed and validated and implementation report of the previous recommendations.	Publication of statistics of the HEI and IMS reports; organizational and financial audit report; remedial measures proposed and validated and implementation report of the previous recommendations.



	Protocol for monitoring DLR2	<p>HEIs will submit to the PIU the following documents: (i) the document submitting the draft to the technical review of the national party in charge of proposing the document for approval; (ii) comments / opinions of the Technical Commission; (iii) the document submitting the MP to Board for approval and advice/comments from the Board; (iv) MP finalized taking into account the opinions collected; (v) approval document by the national body together with the final document; (vi) letter of transmittal and draft submitted to IDA for technical advice. <u>The above-mentioned documents should be received by the Bank before March 15, 2015.</u> The Bank will consider the condition as having been met following the receipt, verification and approval of all documents aforementioned.</p>	<p>HEIs will submit to the PIU the following documents: (i) report of implementation of the management tools adopted including those for the effective management of enrollments and resources management system; (ii) hard copy and digital format of the statistical information of the previous year accompanied with projections for the following year; (iii) financial, accounting and administration audit report of the HEI for the past year; (iv) letter of transmittal and draft submitted to IDA for technical advice. The Bank will consider the condition as having been met following the receipt, verification and approval of all the mentioned documents, as well as reaching the agreed target for the DLR of the year, and the <b><u>project will release the agreed amount to the HEI before June 30, 2016.</u></b></p>	<p>HEIs will submit to the PIU the following documents: (i) report of implementation of the management tools adopted including those for the effective management of enrollments and resources management system; (ii) hard copy and digital format of the statistical information of the previous year accompanied with projections for the following year; (iii) financial, accounting and administration audit report of the HEI for the past year; (iv) letter of transmittal and draft submitted to IDA for technical advice. The Bank will consider the condition as having been met following the receipt, verification and approval of all the mentioned documents, as well as reaching the agreed target for the DLR of the year, and the <b><u>project will release the agreed amount to the HEI before June 30, 2017</u></b></p>	<p>HEIs will submit to the PIU the following documents: (i) report of implementation of the management tools adopted including those for the effective management of enrollments and resources management system; (ii) hard copy and digital format of the statistical information of the previous year accompanied with projections for the following year; (iii) financial, accounting and administration audit report of the HEI for the past year; (iv) letter of transmittal and draft submitted to IDA for technical advice. The Bank will consider the condition as having been met following the receipt, verification and approval of all the mentioned documents, as well as reaching the agreed target for the DLR of the year, and the <b><u>project will release the agreed amount to the HEI before June 30, 2018</u></b></p>	<p>HEIs will submit to the PIU the following documents: (i) report of implementation of the management tools adopted including those for the effective management of enrollments and resources management system; (ii) hard copy and digital format of the statistical information of the previous year accompanied with projections for the following year; (iii) financial, accounting and administration audit report of the HEI for the past year; (iv) letter of transmittal and draft submitted to IDA for technical advice. The Bank will consider the condition as having been met following the receipt, verification and approval of all the mentioned documents, as well as reaching the agreed target for the DLR of the year, and the <b><u>project will release the agreed amount to the HEI before June 30, 2019</u></b></p>
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	DLR3: Approval of HEIs IDPs and yearly operational budget with indicators.	The five-year PS finalized (including progressive targets over the five years with follow-up mechanisms and identified leaders, a budget and clear indicators from which will be extracted the DLIs over the duration of the project); first year objectives, activities and indicators defined. All documents duly approved by the Board of Trustees.	PS revised with DLIY2 objectives defined and approved by the Board of Trustees.	PS revised with DLIY3 objectives defined and approved by the Board of Trustees.	PS revised with DLIY4 objectives defined and approved by the Board of Trustees.	PS revised with DLIY5 objectives defined and approved by the Board of Trustees.
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	<p>Protocol for monitoring DLR3</p>	<p>The HEIs will submit to the PIU the following documents: (i) letter of transmittal and draft submitted to IDA for technical advice; (ii) revised document and letter of transmittal to the IDP (PS) revised with DLI2 objectives defined and approved by the Board of Trustees for review and approval; (iii) suggestions/comments by the PS revised with DLI2 objectives defined and approved by the Board of Trustees and final approval and revised documents; (iv) the final document should include in Annex 1 statistical data of the HEI and the projections for the five years of the project. <u>The above-mentioned documents should be received by the Bank before March 15, 2015.</u> The Bank will consider the condition as having been met.</p>	<p>The HEIs will submit to the PIU the following documents: (i) updated document and letter of transmittal to the PS revised with DLI2 objectives defined and approved by the Board of Trustees for review and approval; (ii) suggestions / comments by the PS revised with DLI2 objectives defined and approved by the Board of Trustees and final approval and revised documents; (iii) the final document should include in Annex 1 statistical data of the HEI for the past year with the discrepancies noted and projections for next years of the project. The Bank will consider the condition as having been met following the receipt, verification and approval of all the above-mentioned documents, as well as reaching the agreed target for the DLR of the year, and the <b><u>project will release the agreed amount to the HEI before June 30, 2016.</u></b></p>	<p>The HEIs will submit to the PIU the following documents: (i) updated document and letter of transmittal to the PS revised with DLI2 objectives defined and approved by the Board of Trustees for review and approval; (ii) suggestions / comments by the PS revised with DLI2 objectives defined and approved by the Board of Trustees and final approval and revised documents; (iii) the final document should include in Annex 1 statistical data of the HEI for the past year with the discrepancies noted and projections for next years of the project. The Bank will consider the condition as having been met following the receipt, verification and approval of all the above-mentioned documents, as well as reaching the agreed target for the DLR of the year, and the <b><u>project will release the agreed amount to the HEI before June 30, 2017</u></b></p>	<p>The HEIs will submit to the PIU the following documents: (i) updated document and letter of transmittal to the PS revised with DLI2 objectives defined and approved by the Board of Trustees for review and approval; (ii) suggestions / comments by the PS revised with DLI2 objectives defined and approved by the Board of Trustees and final approval and revised documents; (iii) the final document should include in Annex 1 statistical data of the HEI for the past year with the discrepancies noted and projections for next years of the project. The Bank will consider the condition as having been met following the receipt, verification and approval of all the above-mentioned documents, as well as reaching the agreed target for the DLR of the year, and the <b><u>project will release the agreed amount to the HEI before June 30, 2018</u></b></p>	<p>The HEIs will submit to the PIU the following documents: (i) updated document and letter of transmittal to the PS revised with DLI2 objectives defined and approved by the Board of Trustees for review and approval; (ii) suggestions / comments by the PS revised with DLI2 objectives defined and approved by the Board of Trustees and final approval and revised documents; (iii) the final document should include in Annex 1 statistical data of the HEI for the past year with the discrepancies noted and projections for next years of the project. The Bank will consider the condition as having been met following the receipt, verification and approval of all the above-mentioned documents, as well as reaching the agreed target for the DLR of the year, The Bank will consider the condition as having been met following and the <b><u>project will release the agreed amount to the HEI before June 30, 2019</u></b></p>
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<b>DLI2 : Improved Relevance of Selected Programs<sup>18</sup></b>	DLR4: Number of new students (NE) enrolled in licensed programs developed with the private sector.	Baseline.	A= number of NE; X = \$ (000); If NE (B) is less than A, the amount payable will be: $Y = (BX)/A$	A= number of NE; X = \$ (000); If NE (B) is less than A, the amount payable will be: $Y = (BX)/A$	A= number of NE; X = \$ (000); If NE (B) is less than A, the amount payable will be: $Y = (BX)/A$	A= number of NE; X = \$ (000); If NE (B) is less than A, the amount payable will be: $Y = (BX)/A$
	Protocol for monitoring DLR4	As an integral part of Annex 1 of the IDP, each HEI should include in its objectives and indicators, information on the number of students registered for the academic year 2014-2015 by level, sector and gender, specifying repeaters and newcomers, as well as annual targets which will be contracted for this indicator. These figures should be extracted from the database of the HEI and be consistent with those at the central level (MESRS) and the CENOU. The project reserves the right to undertake an audit of the database in collaboration with the NICHE project or an external consultant.	Each HEI will submit to the PIU the following documents: (i) the tables extracted from the school management system for the current academic year (from October 30 to May 30 of the school year); (ii) the report on the progress of the enrolment in comparison with the past year, with a focus on the licensed programs; (iii) report to the Board of Trustees on enrolments and analysis of the management of the HEI; projections on enrollment for the coming years. The project reserves the right to audit databases in collaboration with the NICHE project or an external consultant. The Bank will consider the condition as having been met following the receipt, verification and approval of all the	Each HEI will submit to the PIU the following documents: (i) the tables extracted from the school management system for the current academic year (from October 30 to May 30 of the school year); (ii) the report on the progress of the enrolment in comparison with the past year, with a focus on the licensed programs; (iii) report to the Board of Trustees on enrolments and analysis of the management of the HEI; projections on enrollment for the coming years. The project reserves the right to audit databases in collaboration with the NICHE project or an external consultant. The Bank will consider the condition as having been met following the receipt, verification and approval of all the	Each HEI will submit to the PIU the following documents: (i) the tables extracted from the school management system for the current academic year (from October 30 to May 30 of the school year); (ii) the report on the progress of the enrolment in comparison with the past year, with a focus on the licensed programs; (iii) report to the Board of Trustees on enrolments and analysis of the management of the HEI; projections on enrollment for the coming years. The project reserves the right to audit databases in collaboration with the NICHE project or an external consultant. The Bank will consider the condition as having been met following the receipt, verification and	Each HEI will submit to the PIU the following documents: (i) the tables extracted from the school management system for the current academic year (from October 30 to May 30 of the school year); (ii) the report on the progress of the enrolment in comparison with the past year, with a focus on the licensed programs; (iii) report to the Board of Trustees on enrolments and analysis of the management of the HEI; projections on enrollment for the coming years. The project reserves the right to audit databases in collaboration with the NICHE project or an external consultant. The Bank will consider the condition as having been met following the receipt, verification and approval of all the DLR of the year, and

<sup>18</sup> For a DLR 4-7 under DLI 2 to be considered for any payment, the result has to be achieved at least at 50 percent of the target for the year.

			mentioned documents, as well as reaching the agreed target for the DLR of the year, and the <b><u>project will release the agreed amount to the HEI before June 30, 2016.</u></b>	mentioned documents, as well as reaching the agreed target for the DLR of the year, and the <b><u>project will release the agreed amount to the HEI before June 30, 2017</u></b>	approval of all the mentioned documents, as well as reaching the agreed target for the DLR of the year, and the <b><u>project will release the agreed amount to the HEI before June 30, 2018</u></b>	the <b><u>project will release the agreed amount to the to HEI before June 30, 2019</u></b>
	DLR5: Number of teachers trained (NEF) in the new or existing licensed courses.	Baseline	A = number of NEF; X = \$ (000); If NEF (B) is less than a, the amount payable will be: $Y = (BX)/A$	A = number of NEF; X = \$ (000); If NEF (B) is less than a, the amount payable will be: $Y = (BX)/A$	A = number of NEF; X = \$ (000); If NEF (B) is less than a, the amount payable will be: $Y = (BX)/A$	A = number of NEF; X = \$ (000); If NEF (B) is less than a, the amount payable will be: $Y = (BX)/A$

	Protocol for monitoring DLR5	<p>As an integral part of the IDP, each HEI will include in the indicators a line on the number of in-service teachers and contractors in respect of the academic year 2014-2015 by rank, gender, years of service and number of years to retirement, training in which they operate by level (year or semester) as well as the recruitment and training planned over the life of the IDP. These figures will be extracted from the computer database of the HEI and consistent with those at the central (MESRS) and HRD levels. The project reserves the right to audit the databases in collaboration with the NICHE project or an external consultant.</p>	<p>As an integral part of the report on the implementation of the IDP, each HEI will include information on the progress made in teachers training compared to the previous year as well as provide information on the types of training on licensed programs. This information will report on the number of staffs (teaching and technical support) for the current academic year by rank, gender, years of service and number of years to retirement, programs on which they intervene by level (year or semester) as well as the recruitment and training planned the duration of the IDP. These figures will be extracted from the database of the HEI and be consistent with the database at the central level (MESRS) and the HRD. The project reserves the right to undertake an audit of the databases in collaboration with the NICHE project or an external consultant. The Bank will consider the condition as having been met</p>	<p>As an integral part of the report on the implementation of the IDP, each HEI will include information on the progress made in teachers training compared to the previous year as well as provide information on the types of training on licensed programs. This information will report on the number of staffs (teaching and technical support) for the current academic year by rank, gender, years of service and number of years to retirement, programs on which they intervene by level (year or semester) as well as the recruitment and training planned the duration of the IDP. These figures will be extracted from the database of the HEI and be consistent with the database at the central level (MESRS) and the HRD. The project reserves the right to undertake an audit of the databases in collaboration with the NICHE project or an external consultant. The Bank will consider the condition as having been met</p>	<p>As an integral part of the report on the implementation of the IDP, each HEI will include information on the progress made in teachers training compared to the previous year as well as provide information on the types of training on licensed programs. This information will report on the number of staffs (teaching and technical support) for the current academic year by rank, gender, years of service and number of years to retirement, programs on which they intervene by level (year or semester) as well as the recruitment and training planned the duration of the IDP. These figures will be extracted from the database of the HEI and be consistent with the database at the central level (MESRS) and the HRD. The project reserves the right to undertake an audit of the databases in collaboration with the NICHE project or an external consultant.</p>	<p>As an integral part of the report on the implementation of the IDP, each HEI will include information on the progress made in teachers training compared to the previous year as well as provide information on the types of training on licensed programs. This information will report on the number of staffs (teaching and technical support) for the current academic year by rank, gender, years of service and number of years to retirement, programs on which they intervene by level (year or semester) as well as the recruitment and training planned the duration of the IDP. These figures will be extracted from the database of the HEI and be consistent with the one at the central level (MESRS) and the HRD. The project reserves the right to undertake an audit of the databases in collaboration with the NICHE project or an external consultant. The Bank will consider the condition as having been met following the receipt, verification and approval of all the above-mentioned</p>
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			following the receipt, verification and approval of all the above-mentioned documents, as well as meeting on the agreed target of the DLR, and the <b><u>project will release the agreed amount to the HEI before June 30, 2016.</u></b>	following the receipt, verification and approval of all the above-mentioned documents, as well as meeting on the agreed target of the DLR, and the <b><u>project will release the agreed amount to the HEI before June 30, 2017</u></b>	The Bank will consider the condition as having been met following the receipt, verification and approval of all the above-mentioned documents, as well as meeting on the agreed target of the DLR, and the <b><u>project will release the agreed amount to the HEI before June 30, 2018</u></b>	documents, as well as meeting on the agreed target of the DLR, and the <b><u>project will release the agreed amount to the HEI before June 30, 2019</u></b>
DLR6: Number of renovated or new training programs licensed.	A= Target set for the number of renovated or new programs licensed and previously approved by the Board with the CP recommendation; X=\$ (000) ; B= achieved number of programs; If B<A, then the amount payable will be: $Y = (B.X)/A$	A= Target set for the number of renovated or new programs licensed and previously approved by the Board with the CP recommendation; X=\$ (000) ; B= achieved number of programs; If B<A, then the amount payable will be: $Y = (B.X)/A$	A= Target set for the number of renovated or new programs licensed and previously approved by the Board with the CP recommendation; X=\$ (000) ; B= achieved number of programs; If B<A, then the amount payable will be: $Y = (B.X)/A$	A= Target set for the number of renovated or new programs licensed and previously approved by the Board with the CP recommendation; X=\$ (000) ; B= achieved number of programs; If B<A, then the amount payable will be: $Y = (B.X)/A$	A= Target set for the number of renovated or new programs licensed and previously approved by the Board with the CP recommendation; X=\$ (000) ; B= achieved number of programs; If B<A, then the amount payable will be: $Y = (B.X)/A$	A= Target set for the number of renovated or new programs licensed and previously approved by the Board with the CP recommendation; X=\$ (000) ; B= achieved number of programs; If B<A, then the amount payable will be: $Y = (B.X)/A$

	Protocol for monitoring DLR6	<p>The HEIs will submit to the PIU the following documents:</p> <ul style="list-style-type: none"> <li>(i) the document formalizing the appointment of the CP members according to their area of training;</li> <li>(ii) Convocation letter convening the session of the CP for each of the training areas;</li> <li>(iii) Copies of documents submitted to the CP;</li> <li>(iv) List of attendance with signatures;</li> <li>(v) CP deliberations on the programs and approved minutes of the session;</li> <li>(vi) minutes of deliberation of the Board that approves the proposals or, where necessary, documents reviewed based on changes requested by the Board;</li> <li>(vii) the rules of appointment and operation of the CP as well as any official document that enables to understand the regulatory framework governing the CP.</li> </ul> <p>The transmittal letter of the various documents must indicate in Annex 1 the list of the baseline and yearly targets for the each year of the project. <u>The above-mentioned documents</u></p>	<p>The HEIs will submit to the PIU the following documents:</p> <ul style="list-style-type: none"> <li>(i) the document formalizing the appointment of the CP members according to their area of training;</li> <li>(ii) Convocation letter convening the session of the CP for each of the training areas;</li> <li>(iii) Copies of documents submitted to the CP;</li> <li>(iv) List of attendance with signatures;</li> <li>(v) CP deliberations on the programs and approved minutes of the session;</li> <li>(vi) minutes of deliberation of the Board that approves the proposals or, where necessary, documents reviewed based on changes requested by the Board;</li> <li>(vii) the rules of appointment and operation of the CP as well as any official document that would have changed the regulatory framework governing the CP since the last session.</li> </ul> <p>The transmittal letter of the various documents must indicate in Annex 1 the list of the licensed programs achieved and any gap with the initial target as well as</p>	<p>The HEIs will submit to the PIU the following documents:</p> <ul style="list-style-type: none"> <li>(i) the document formalizing the appointment of the CP members according to their area of training;</li> <li>(ii) Convocation letter convening the session of the CP for each of the training areas;</li> <li>(iii) Copies of documents submitted to the CP;</li> <li>(iv) List of attendance with signatures;</li> <li>(v) CP deliberations on the programs and approved minutes of the session;</li> <li>(vi) minutes of deliberation of the Board that approves the proposals or, where necessary, documents reviewed based on changes requested by the Board;</li> <li>(vii) the rules of appointment and operation of the CP as well as any official document that would have changed the regulatory framework governing the CP since the last session.</li> </ul> <p>The transmittal letter of the various documents must indicate in Annex 1 the list of the licensed programs achieved and any gap with the initial target as well as</p>	<p>The HEIs will submit to the PIU the following documents:</p> <ul style="list-style-type: none"> <li>(i) the document formalizing the appointment of the CP members according to their area of training;</li> <li>(ii) Convocation letter convening the session of the CP for each of the training areas;</li> <li>(iii) Copies of documents submitted to the CP;</li> <li>(iv) List of attendance with signatures;</li> <li>(v) CP deliberations on the programs and approved minutes of the session;</li> <li>(vi) minutes of deliberation of the Board that approves the proposals or, where necessary, documents reviewed based on changes requested by the Board;</li> <li>(vii) the rules of appointment and operation of the CP as well as any official document that would have changed the regulatory framework governing the CP since the last session.</li> </ul> <p>The transmittal letter of the various documents must indicate in Annex 1 the list of the licensed programs achieved</p>	<p>The HEIs will submit to the PIU the following documents:</p> <ul style="list-style-type: none"> <li>(i) the document formalizing the appointment of the CP members according to their area of training;</li> <li>(ii) Convocation letter convening the session of the CP for each of the training areas;</li> <li>(iii) Copies of documents submitted to the CP;</li> <li>(iv) List of attendance with signatures;</li> <li>(v) CP deliberations on the programs and approved minutes of the session;</li> <li>(vi) minutes of deliberation of the Board that approves the proposals or, where necessary, documents reviewed based on changes requested by the Board;</li> <li>(vii) the rules of appointment and operation of the CP as well as any official document that would have changed the regulatory framework governing the CP since the last session.</li> </ul> <p>The transmittal letter of the various documents must indicate in Annex 1 the list of the licensed programs achieved and any gap with the initial target as well as the objectives for the following year. <u>The above-mentioned</u></p>
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		<p><u>must be received by the Bank before March 15, 2015.</u> The Bank reserves the right to directly contact the members of the CP to check the information transmitted. The Bank will consider the condition as having been met.</p>	<p>the objectives for the following year. <u>The above-mentioned documents must be received by the Bank before April 30, 2016.</u> The Bank reserves the right to directly contact the members of the CP to check the information transmitted. The Bank will consider the condition as having been met following the receipt, verification and approval of all documents mentioned above, as well as reaching the agreed target for the DLR and the year, and the <b><u>project will release the agreed amount to the HEI June 30, 2016.</u></b></p>	<p>the objectives for the following year. <u>The above-mentioned documents must be received by the Bank before April 30, 2017.</u> The Bank reserves the right to directly contact the members of the CP to check the information transmitted. The Bank will consider the condition as having been met following the receipt, verification and approval of all documents mentioned above, as well as reaching the agreed target for the DLR and the year, and the <b><u>project will release the agreed amount to the HEI June 30, 2017.</u></b></p>	<p>and any gap with the initial target as well as the objectives for the following year. <u>The above-mentioned documents must be received by the Bank before April 30, 2018.</u> The Bank reserves the right to directly contact the members of the CP to check the information transmitted. The Bank will consider the condition as having been met following the receipt, verification and approval of all documents mentioned above, as well as reaching the agreed target for the DLR and the year, and the <b><u>project will release the agreed amount to the HEI June 30, 2018.</u></b></p>	<p><u>documents must be received by the Bank before April 30, 2019.</u> The Bank reserves the right to directly contact the members of the CP to check the information transmitted. The Bank will consider the condition as having been met following the receipt, verification and approval of all documents mentioned above, as well as reaching the agreed target for the DLR and the year, and the <b><u>project will release the agreed amount to the HEI June 30, 2019.</u></b></p>
DLR7: Percentage Increase in Financial Resources Generated Internally (RFG)	Baseline	A= percent RFG X=\$ (000) ; If RFG (B) is lesser than a, the amount to be paid will be : Y= (B.X)/A	A= percent RFG X=\$ (000) ; If RFG (B) is lesser than a, the amount to be paid will be : Y= (B.X)/A	A= percent RFG X=\$ (000) ; If RFG (B) is lesser than a, the amount to be paid will be : Y= (B.X)/A	A= percent RFG X=\$ (000) ; If RFG (B) is lesser than a, the amount to be paid will be : Y= (B.X)/A	A= percent RFG X=\$ (000) ; If RFG (B) is lesser than a, the amount to be paid will be : Y= (B.X)/A

	Protocol for monitoring DLR7	<p>As an integral part of the IDP, each HEI will include in the indicators the full information on financial resources for 2014, by type (own resources, government subsidies, various grants-state and private, funds allocated to projects by each donor, etc.) as well as yearly projections for the duration of the IDP. To be comprehensive, projections should be accompanied by a note describing the basic assumptions of the projections.</p>	<p>As an integral part of the IDP, each HEI will inform in its indicators the information on the progress of its financial resources since 2014, by type (own resources, government subsidies, various grants-states and private, funds allocated to projects by each donor, etc.) as well as its projections adjusted per year for the duration of the IDP. The Bank will consider the condition as having been met following the receipt, verification and approval of all the above-mentioned documents, as well as achievement of the agreed target for the DLR, and the <b><u>project will release the agreed amount to the HEI before June 30, 2016.</u></b></p>	<p>As an integral part of the IDP, each HEI will inform in its indicators the information on the progress of its financial resources since 2014, by type (own resources, government subsidies, various grants-states and private, funds allocated to projects by each donor, etc.) as well as its projections adjusted per year for the duration of the IDP. The Bank will consider the condition as having been met following the receipt, verification and approval of all the above-mentioned documents, as well as achievement of the agreed target for the DLR, and the <b><u>project will release the agreed amount to the HEI before June 30, 2017</u></b></p>	<p>As an integral part of the IDP, each HEI will inform in its indicators the information on the progress of its financial resources since 2014, by type (own resources, government subsidies, various grants-states and private, funds allocated to projects by each donor, etc.) as well as its projections adjusted per year for the duration of the IDP. The Bank will consider the condition as having been met following the receipt, verification and approval of all the above-mentioned documents, as well as achievement of the agreed target for the DLR, and the <b><u>project will release the agreed amount to the HEI before June 30, 2018</u></b></p>	<p>As an integral part of the IDP, each HEI will inform in its indicators the information on the progress of its financial resources since 2014, by type (own resources, government subsidies, various grants-states and private, funds allocated to projects by each donor, etc.) as well as its projections adjusted per year for the duration of the IDP. The Bank will consider the condition as having been met following the receipt, verification and approval of all the above-mentioned documents, as well as achievement of the agreed target for the DLR, and the <b><u>project will release the agreed amount to the HEI before June 30, 2019</u></b></p>
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## Annex 5: Details of Selected Universities

### Republic of Mali: Higher Education Support Project

1. The four HEIs below have been selected based on programs offered in these institutions which are linked to the three main economic sectors targeted by the project: agriculture, livestock, and mining. These sectors have been selected based on their contribution to the country economic growth. Despite many governance challenges the selected HEIs are facing, they have recently demonstrated their willingness and commitment to undertake reforms and to deliver relevant programs to ensure training of a qualified workforce needed by the economy. All four HEIs have already made significant progress on: (a) setting-up a university council in three HEIs which have held their first session; (b) having a functional Conseil de Perfectionnement in place all selected HEIs which have proposed programs to be licensed for the coming academic year; (c) drafting of an operational manual (three HEIs); and (d) submission of IDPs. Project support will sustain their commitment as first results will be emerging.

#### *Katibougou Rural Polytechnic Institute (Institut Rural Polytechnique de Katibougou -- IPRK)*

2. **Background:** IPRK was created in 1902 as a training school for technicians in agriculture. In 1952, IPRK became a sub-regional school until 1995, when it became a Training and Research Institute in agriculture. In 2010, the school became a Scientific and Technological Public School (STPS), with an autonomous status, and more responsibilities over its management and its resources.

3. In 2013, IPRK had 1,400 students of different nationalities, including students from: Benin, Burkina Faso, Burundi, Cameroun, Central African Republic, Comoros Islands, Democratic Republic of Congo, Cote d'Ivoire, Gabon, Guinea, Madagascar, Mauritania, Niger, Rwanda, Senegal, Chad, and Togo.

4. As a public school of higher education, IPRK's main mission is the training of agricultural engineers, agricultural economists, high level technicians in the fields of agriculture, livestock, waters and forests, and rural engineering. Along the training of undergraduate students, the school provides in-service training of rural development managers and young graduates through the development of projects in agriculture, forestry and livestock business.

5. Research activities are conducted in the following areas: agro-physio-genetics and vegetal, and animal biotechnologies, soil science, ethnobotany, crop protection, animal productions and health, forest and fishery productions, agro-forestry and environmental protection, economic and social sciences, new and renewable energies.

6. **Human resources:** The staff of the school comprises teaching and research staff, and the administrative, technical, and support staff. The total number of teachers is currently 152; however this personnel is aging. The number of administrative, technical, operational and support personnel (*Personnel Administratif, technique, opérationnel et support – PATOS*)<sup>19</sup> is 38, including 19 permanent and 19 contractual staff.

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<sup>19</sup> Personnel administratif, technique, ouvrier et de soutien

The table below summarizes the number of teachers per area and department, and per grade.

**Table 1: Overview of teachers by area, department and per grade**

Teaching and Research Department	Professors	Lecturers	Assistant Professors	Assistants teachers with :		Engineers with no teaching degree	Total
				PhD	DEA/Masters		
Sciences and Farming Techniques (SFT)	7	10	7	1	11	12	<b>48</b>
Sciences and Breeding Techniques (SBT)	4	3	5	1	23	7	<b>43</b>
Social Economic Sciences (SES)	1	0	0	4	10	12	<b>27</b>
Rural and Waters & Forest Engineering (RWFE)	1	4	3	1	10	8	<b>27</b>
Basic Sciences (BS)	1	2	0	0	4	0	<b>7</b>
<b>TOTAL</b>	<b>14</b>	<b>19</b>	<b>15</b>	<b>7</b>	<b>58</b>	<b>39</b>	<b>152</b>

7. **Governance and Management:** As per its procedures, IPRK would have the following structures which govern the institution: (i) the Board of Directors, the Management, (ii) the Educational and Scientific Council, (iii) the *Conseil de Perfectionnement* (CP), (iv) the Disciplinary Board, and (v) Departments. However, these governing bodies are not operating as evidenced by the fact that the last meeting of the CP was held in 2008; and the management team lacks the means to ensure that the institution operates efficiently. IPRK does not have a manual of procedures, which creates various problems related to the definition of roles and responsibilities, causes delays in processing administrative issues. These issues highlight IPRK's weaknesses in governance, its limited teaching staff, low capacity to manage financial resources, exacerbated by a lack of a procedural manual for financial and accounting, lack of monitoring of graduates, obsolescence and low level of equipment of training facilities and research support.

8. **Training Programs:** The institute offers four types of degree: Engineer, Masters, Bachelor and *Diplôme Universitaire de Technicien Supérieur* (DUTS). The domains of training are: 3 types of engineering degrees, 7 Advanced Technician University Degrees, 1 Master's Degree in agricultural extension, and 4 professional Bachelor Degrees.

9. The table below lists the programs for the academic year for 2012-2013 and the number of students per specialization, training program or area, and the success rate as available.

**Table 2: Training programs at IPRK/IFRA 2012-2013**

N/N	Type of degree	Number of students enrolled	Success rate (%)
1.	Waters & Forests Engineer	59	100
2.	Agronomist	97	98
3.	Animal Scientist	65	100
4.	Master's Degree in Agricultural Extension	75	100
5.	Bachelor Degree in Agro-Economics	98	100
6.	DUTS in Plant Improvement and Seed Production (APPS)	63	98
7.	DUTS Production of Food and Industrial Crops (PCVI)	101	100
8.	DUTS Horticultural Production (HP)	74	100
9.	DUTS Development and Management of Fishery and Forest Resources (AGRFH)	90	98
10.	DUTS in Hydro-Agricultural Development (HAD)	132	90
11.	DUTS in Meat Production (MP)	91	99
12.	DUTS in Poultry Production (PAVI)	56	99
13.	Bachelor Degree in Subsistence Agriculture	26	na
14.	Bachelor Degree in Animal Science	11	na
15.	Bachelor Degree in fishery and Aquaculture Resources	11	na
16.	Bachelor Degree in Hydro-Agricultural Development	26	na
17.	Bachelor Degree in Development and Management of Forest and Wildlife Resources	9	na
	<b>TOTAL</b>	<b>1084</b>	

10. **Financial Resources:** The institute relies on the government budget allocations as its main source of financing. These allocations support the payment of core operational costs such as salaries of the teaching staff and support staff.

11. In addition to budget allocations, IPRK generates its own resources through income-generating activities and application fees. The activities implemented are agro-sylvo-pastoral farming, paid training (degree or vocational courses), steering of research projects (research contracts); however, there are no data available on these generated funds.

12. For the 2012-2013 academic year the government allocation to the institute amounts to FCFA 1.683 billion and 64 percent of this is for salaries (see table below).

**Table 3: IPRK's resources in (thousands of FCFA)**

RESOURCES	AMOUNT		
	Year 2012	Year 2013	Year 2014
State Budget	-na	1, 520, 663	1, 682, 809
Own Funds	na	na	na
Other grants	na	na	na
<b>TOTAL</b>	-	<b>1, 520, 663</b>	<b>1, 682, 809</b>

13. IPRK is already benefiting from the IDA regional West African Agriculture Productivity Project (WAAPP) which supports research and teachers training activities to enhance agriculture productivity and HEIs research and teaching capacity.

14. **Students:** There were 1,400 students registered in 2012-2013 academic year at the institute. This number includes all students (all degrees and years). Selection for admission to IPRK is done in three ways: (i) through direct competition; (ii) through professional competition; and (iii) based on application review.

15. From 2009 to 2012 the enrollment trend grew by 16 percent as the number of students enrolled had increased from 413 to 480 during the same period. Enrollments per cycle from 2012 to 2013 were as follows: 22 percent were enrolled in engineering cycle, 18 percent in new Bachelor degrees, 7 percent in the agro-economics Bachelor program, and 53 percent in DUTS (from vocational technical training centers and holders of *Brevet de Technicien – BT2*).

16. But during the course of the last couple years, there have been contrasting trends in student numbers by level of study with a growing number of professionals while the number of high school graduates decreases. In 2013, the number of professional students stood at 65 percent compared to only 22 percent of holders of a high school diploma – this shows that most of the students enrolled are professionals.

**Table 4: Enrollment trends from 2010 to 2012**

N/N	Title of the degree	Year 2009/10	Year 2010/11	Year 2011/12
1.	Waters & Forests Engineer	14	31	23
2.	Agronomist	41	27	38
3.	Animal Husbandry Specialist	24	30	25
4.	Master in Agricultural Extension	20	07	15
5.	Bachelor in Agro-economics	30	35	35
6.	DUTS in Plants Improvement and Seed Production (APPS)	27	35	36
7.	DUTS Production of Food and Industrial Crops (PCVI)	33	54	57
8.	DUTS Horticultural Production (HP)	28	37	41
9.	DUTS Development and Management of Forest and Fishery Resources (AGRFH)	51	47	52
10.	DUTS in Hydro-Agricultural Development (HAD)	105	59	79
11.	DUTS in Meat Production (MP)	29	47	49
12.	DUTS in Poultry Production (PAVI)	11	31	30
	<b>TOTAL</b>	<b>413</b>	<b>440</b>	<b>480</b>

***National School of Engineering (Ecole Nationale d’Ingénieurs – ENI)***

17. **Background:** ENI was created in 1939 as the Bamako Higher Technical School. It underwent many mutations and changes in name; it was the *Francophone West Africa School of Public Works (ETP)* from 1962 until 1969 when it became the *Bamako National Engineering School (ENI)*. It trains engineers and advanced technicians in industrial engineering (mechanics, energy, electricity), in civil engineering (building, hydraulics), geodesy (photometry, surveying, geodesic astronomy) and geology (hydrogeology, mining, and geology).

18. **Human resources:** ENI had 104 permanent and non-permanent teachers in 2012. This included both teachers in training abroad, teachers on secondment or taking time off but serving as contractors, and teachers in service.

**Table 5: Number of permanent teachers per Teaching and Research Department (TRD) (academic year 2012-2013)**

TRD	Full Professor	Lecturers	Assistant Teachers	Assistants with PhD	Assistants without PhD	TOTAL
Civil Engineering	0	5	6	1	5	17
Industrial Engineering	1	7	5	7	21	41
Geodesy	1	0	0	0	1	2
Geology	1	4	2	2	3	12
<b>Total ENI-ABT</b>	<b>3</b>	<b>16</b>	<b>13</b>	<b>10</b>	<b>30</b>	<b>72</b>
<b>Category (Rank)</b>	<b>Rank A</b>		<b>Rank B</b>			
<i>Number per category</i>	<i>19</i>		<i>53</i>			<i>72</i>
<i>Percentage</i>	<i>26.39</i>		<i>73.61</i>			<i>100</i>

19. Teachers are unevenly distributed among the four departments (Civil Engineering; Industrial Engineering, Geodesy, Geology). In 2012 Civil Engineering and Industrial Engineering represented nearly 75 percent of the teaching staff (43 percent for the Industrial Engineering TRD and 31 percent for the Civil engineering). By contrast Geodesy has 1 full professor assisted by a laboratory technician for 70 students. The overall students-teachers ratio is 9 to 1; which is deemed satisfactory with regard to the standard used by UNESCO.

20. The Administrative and Technical Staff (PATOS) include staff from accounting and financial services, external relations and cooperation service, documentation and information service, and support staff and workshop and laboratory technicians. The General Director, Director of Studies, Research Director, as well as the heads of related services are all teachers except the head of the accounting and financial service. They are also members of the teaching staff.

**Table 6: Number of Administrative and Technical Staff at ENI ABT (2012-2013 school year)**

<i>Categories of staff</i>	<i>Number</i>
Secretaries and other administrative staff	11
Accounting and financial staff	7
Workshop and laboratory technicians	27
Documentalists and archivists	4
Support staff	6
<b>TOTAL</b>	<b>55</b>

21. **Governance:** ENI is administered by a Board of Directors and managed by a General Director and five advisory bodies, which include three management and administrative and two advisory. The advisory bodies (educational and scientific council, CP and disciplinary council) have a limited functioning as they rarely meet. The management of the institution is ineffective

which limits its capacity to hire and attract competent staffs and students, ensure renewal of laboratory equipment which is insufficient and obsolete; there is no planned in-service training for the teaching staff, lack of technical staff for laboratories and workshops.

22. **Training offerings:** ENI provides training in a dozen of specializations in the different TRDs, with two levels (courses) of training: the **Engineering course** and the **Advanced Technician course**. The table below illustrates the ENI's training offerings in 2012-2013.

**Table 7: ENI Training Offerings**

<i>Degrees</i>	<i>Specialization: Option</i>	<i>Relating department</i>	<i>Duration of training</i>
<i>Degree Advanced Technician– (Diplôme de Technicien Supérieur-DTS)</i>	Civil Engineering (CE)	Advanced Technician Course (TRD AT)	2 years + 6 months of internship and validation of a dissertation paper
	Topography (Topo)		
	Mining (EM)		
	Industrial Engineering and Maintenance (IEM)		
	Telecommunications and Information Engineering (TIE)		
	Thermal Engineering and Energy (TEE)		
<i>Degree Design Engineer – (Diplôme d'ingénieur de conception-DIC)</i>	Civil Engineering: Building and Public Works (BTP)	Civil Engineering	3 years with completion of an end-of study dissertation
	Civil Engineering: Hydraulics		
	Topography	Geodesy	
	Geology: Hydrogeology	Geology	
	Geology: Metallogeny		
	Industrial Engineering: Electricity	Industrial Engineering	
	Industrial Engineering: Mechanics		
	Industrial Engineering: Energy		

23. **Financial Resources:** The operating cost and the financing needs for investment are largely supported by the state budget and to a lesser extent by the grants allocated by partners or the school's own resources. Operating costs mainly consist of salaries and wages of permanent teachers, overtime, shifts, and salaries of administrative and technical workers (civil servants and contractors).

24. The institution's own resources include (Malian and foreign) students and auditors' enrollment fees), services provided by the Expertise and Productions Unit (EPU) and grants allocated under signed technical partnerships (UFAE-GCMI).



**Table 8: ENI resources in (thousands of CFA francs)**

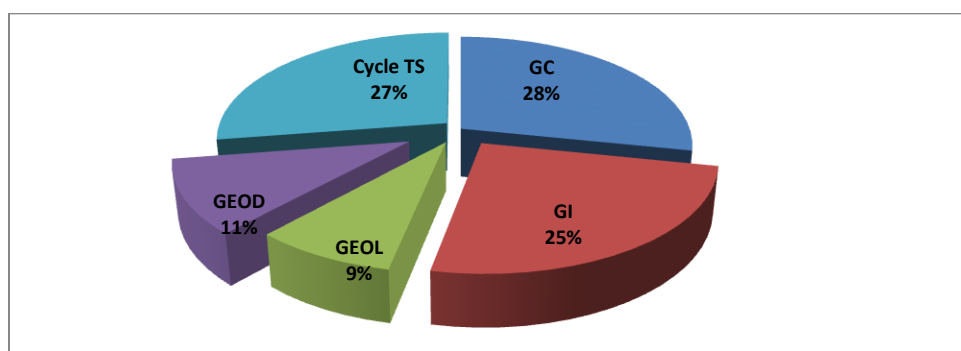
RESOURCES	AMOUNT		
	Year 2012	Year 2013	Year 2014
State Budget	1, 204, 176	828, 900	1, 054, 834
Own funds	147 380	na	na
Other grants	0	na	na
<b>TOTAL</b>	<b>1, 351, 556</b>	<b>828, 900</b>	<b>1, 054, 834</b>

25. **Students:** Enrollment in the school is done through direct competition for those holding a *Diplôme d'enseignement universitaire général* (DEUG) of the current year in (mathematics, physics-chemistry), DUTS or any equivalent degree after review of the application by a selection committee. In 2012, **645** students were registered with 468 in the engineer programs and **177** in the advanced technician programs. The number of students, enrolled in the civil engineering and industrial engineering programs, so called traditional specializations, represented 73.3 percent of all students. The Advanced Technician programs accounted for one quarter (27 percent) of the total number of students.

**Table 9: Number Students/TRD/Origin**

	<i>Civil engineering</i>	<i>Industrial engineering</i>	<i>Geology</i>	<i>Geodesy</i>	<i>Advanced Technician</i>	<i>TOTAL</i>
Maliens	108	121	52	45	171	<b>497</b>
Foreigners	74	40	3	25	6	<b>148</b>
<b>TOTAL</b>	<b>182</b>	<b>161</b>	<b>55</b>	<b>70</b>	<b>177</b>	<b>645</b>

**Figure 1. Breakdown of number of students in 2012/TRD**



***The University of Segou (UOS)***

26. **Background:** Established in 2010, The UOS is the only public university outside of Bamako. Located in Segou near the *Office du Niger*, the institution that manages lands and investment in the Niger delta with a potential of more than 1 million km<sup>2</sup> of exploitable land, the UOS is in a region also known to have a substantial livestock. UOS has four faculties: Faculty of

Agronomy and Animal Medicine (FAMA), the Faculty of Social Sciences (FASO); the Faculty of the Health Sciences (FASSA), the Faculty of Engineering and Sciences (FAGES) and an Institute of Vocational Training (IUFV).

**27. Human resources:** The school has 60 people including teachers and non-teaching staff such as technical, and support staff. With few permanent teachers, the staff is insufficient to conduct the daily business of the University. The teaching staff is predominantly composed of non-permanent professors or contractors. The University has 39 contractors among which 8 are ranking A, and 45 percent of assistants and *maîtres-assistants* are PhDs. The overall ratio of students to teachers is about 60 if taking into account only permanent teachers.

**28. Governance:** No governance body is in place. In addition to the 500-seat amphitheater built on the national budget to accommodate lectures, the other courses are taught in rooms rented with the CTM or the CERFITEX. The University lacks infrastructure, permanent teachers, a library, and has limited autonomy with a strong dependency on the availability of contractors.

**29. Training Programs:** The UOS offers training in 10 specializations in the three existing faculties: Agro-economy, Hydraulic Agriculture, Animal Production, food Tech, Communication, sociology; Development of the territory SIG; Agricultural machinery, Management Assistant, hospitality, computer engineering. The degrees provided in the faculties include LMD. The IUFV delivers professional bachelor degree.

**Table 10: Financial resources**

RESOURCES	AMOUNT( <i>in thousand FCFA</i> )		
	Year 2012	Year 2013	Year 2014
State Budget	-	2 237 595	2 259 305
Own Funds		-	-
Other Grants	-	-	-
Total	-	2 237 595	2 259 305

**30. Students:** Unlike other universities, admission of students at the University is done through a selection process by a committee and the enrollment fee is higher than the one paid by a student in other public universities. During the academic year 2011-2012 considered as the first year when the courses begun, 368 students were registered, and the agricultural economics sector recorded the largest number of students with 283 out of 368. For the year 2013-2014, the University had a total of 878 students (of which 283 were female).

***The University of Science and Technology (USTTB)***

**31. Background:** USTTB has four faculties: the faculty of Medicine (FMOS), the Faculty of Pharmacy (FAPH), the Faculty of Science and Technology (FST), and the Institute of Applied Science (ISA). Its aim is to provide training in the fields of basic science, health, and applied science and technology.

**32. Human resources:** The University of S&T has 405 teachers-researchers including 147 teachers of rang *magistral* (with a master degree). There are 10,818 students in the four faculties, with a ratio teacher student ratio of 1 to 74. The University employs over 100 administrative, and support staff (PATOS).

**Table 11: Teaching staff of USTTB**

<i>Faculty</i>	<i>Number of Prof</i>	<i>Number of Lecturers</i>	<i>Number of Assistant Teachers</i>	<i>Number of Assistants</i>	<i>Number of Students</i>
<i>FST</i>	10	22	29	142	4607
<i>FMOS</i>	32	70	69	27	4716
<i>FAPH</i>	10	16	8	24	621
<i>ISA</i>	1	1	3	10	251
<i>Total</i>	53	109	109	103	10530

33. **Governance:** USTTB, like other universities in Mali, suffers from poor governance and limited autonomy. USTTB has no control over the recruitment and management of its human resources. Decisions of the Council of the University are expressly subject to approval or the consent of the department except the issues of academic, educational or scientific nature. The weaknesses of the University are: low capacity of university governance; insufficiency and inadequacy of infrastructure; inadequate training to the needs of the economy; low capacity of university libraries and insufficient permanent teachers.

### **Training offerings**

**Table 12: Trainings Programs in the various faculties**

<i>Department</i>	<i>Programs</i>
<i>FST</i>	Bachelor, Master and doctorate in biology, chemistry, physics, mathematics and geology
<i>FMOS</i>	Doctorate of Medicine, CES, Master
<i>FAPH</i>	Doctorate of Pharmacy, CES, Master
<i>ISA</i>	Professional bachelor

34. USTTB has adopted the new LMD system. However, the implementation of the LMD system at the FST has encountered enormous problems. One of the problems has been the difficulty of delivering some programs without accompanying support for practical activities which are necessary to the professionalization of the training. The programs are also not very relevant to the country context, because they are generally developed without external input or a preliminary study to identify the socio-economic relevance.

35. **Financial resources:** The budget is essentially devoted to covering operational costs (salaries, equipment and office equipment, etc.) And the national budget allocation remains the main source of financing for the University (see the table which follows).

**Table 13: The University financial resources (in thousands FCFA)**

<i>Resources</i>	<i>Year 2011</i>	<i>Year 2012</i>	<i>Year 2013</i>	<i>Year 2014</i>
<i>State Budget</i>	na	3,753,937	1,436,401	4,388,884
<i>Own funds</i>	118,893	227,082	206,332	na
<i>Total</i>	na	3,981,019	1,642,733	4,388,884

36. **Students:** The conditions for access to the FST are: direct access for students holding a scientific Baccalaureate and being less than 25 years old, or by way of special competition or test for those holding the *brevet de technicien* (B.T.) or recognized equivalent diploma: *Diplôme d'études fondamentales* (DEF) + 4, the number of foreign applicants may not exceed 25 percent of the total number of applicants, the final registration is conditional upon the payment of the registration fee.

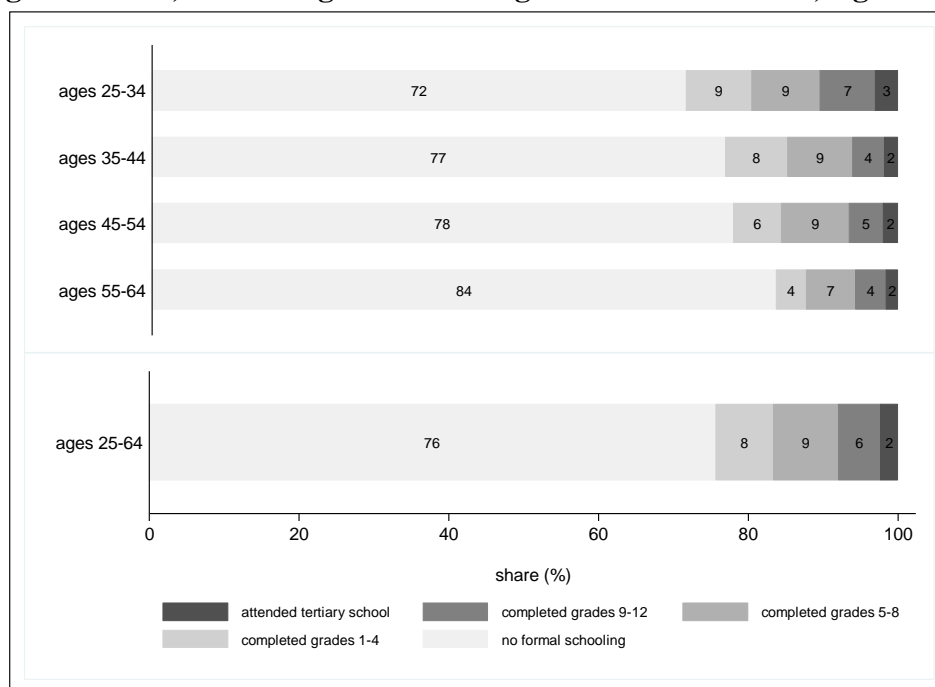
## Annex 6: Economic Analysis

### Republic of Mali: Higher Education Support Project

#### I. Analysis of sector background, and linkages with economic development, poverty reduction and shared prosperity

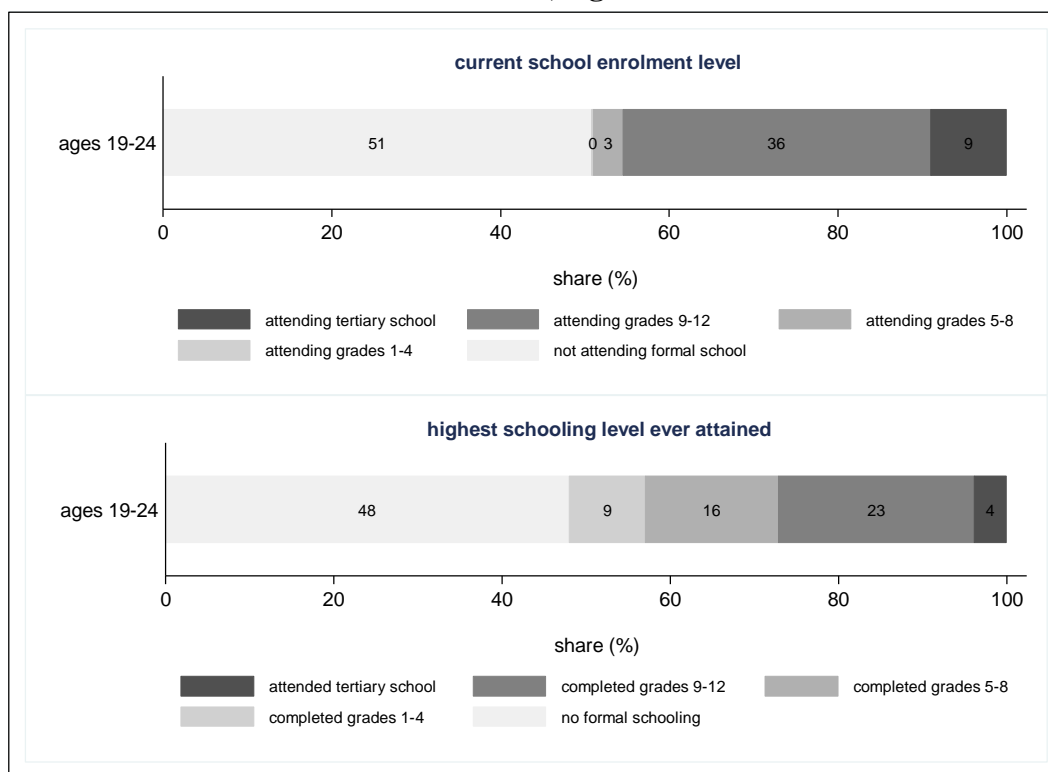
1. **Higher education in Mali is severely limited, with little improvement over the past few decades.** Younger generations have enjoyed only slightly access to higher education than older generations, with approximately 3 percent of those ages 25-34 and 2 percent of ages 35-64 having attained a tertiary grade, as of 2011 (Figure 1). However, there has been a more significant improvement for ages 19-24, with 3 percent having completed a tertiary grade and 8 percent currently attending a tertiary grade, as of 2011 (Figure 2). This youngest generation may have benefited from the stable democratic period in the early 1990s, while older generations were subject to multiple political and social upheavals in their youth. The current crisis that started in 2012 may bring back old challenges to an education system that is still suffering from serious weaknesses. It is also worth noting that 36 percent of 19-24 year-olds attend secondary school, which suggests seriously delayed schooling, ineffective schooling or limited school access, or, quite probably, a combination of all those factors. This could in turn negatively affect participation at the tertiary level.

**Figure 1. Mali, 2011 – Highest Schooling Level Ever Attained, Ages 25-64**



Source: Team's estimations using EMOP 2011-12 period 3 data

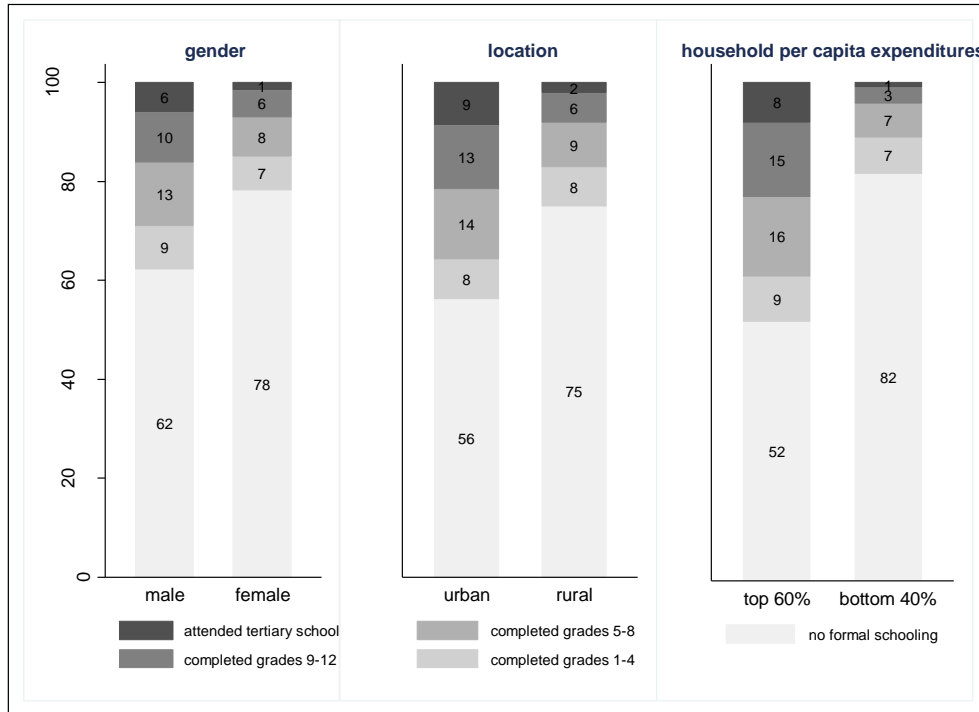
**Figure 2. Mali, 2011 – Current School Enrolment Level and Highest Schooling Level Ever Attained, Ages 19-24**



Source: Team estimations using EMOP 2011-12 period 3 data

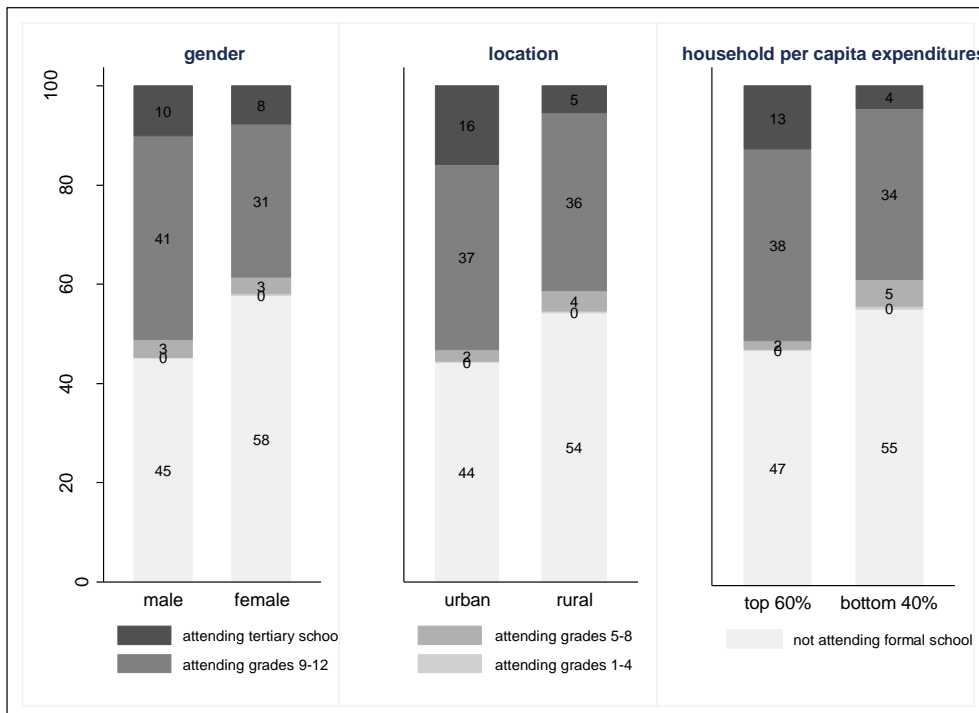
2. **Underlying low tertiary schooling rates are significant disparities between men and women, between urban and rural subpopulations, and between the better-off and those in the bottom 40 percent (measured in terms of household per capita expenditures).** Higher education among women, rural residents and the poorest 40 percent is almost nonexistent among 25-64 year-olds. The higher the education level, the starker the relative disadvantage of the disadvantaged groups (Figure 3). Although the highly educated may be more likely to move to rural areas and to be in the bottom 40 percent, well-documented intergenerational persistence in education and socioeconomic outcomes (see, for example, a synthesis in Black and Devereux 2010) suggests that targeting disadvantaged groups in the provision of school access, especially tertiary school access, may help reduce disparities in future generations directly through the impact of education or indirectly through socioeconomic factors associated with education. Among 19-24 year-olds, rural residents and the poorest 40 percent are significantly less likely to be enrolled in higher education than urban residents and the non-poor, although the divides are less stark than for the older generations (Figure 4). There also appears to be improved gender parity in the younger generations. These are encouraging trends towards improved socioeconomic equity.

**Figure 3. Mali, 2011 – Highest Schooling Level by Gender, Location and Relative Poverty, Ages 25-64**



Source: Team estimations using EMOP 2011-12 period 3 data

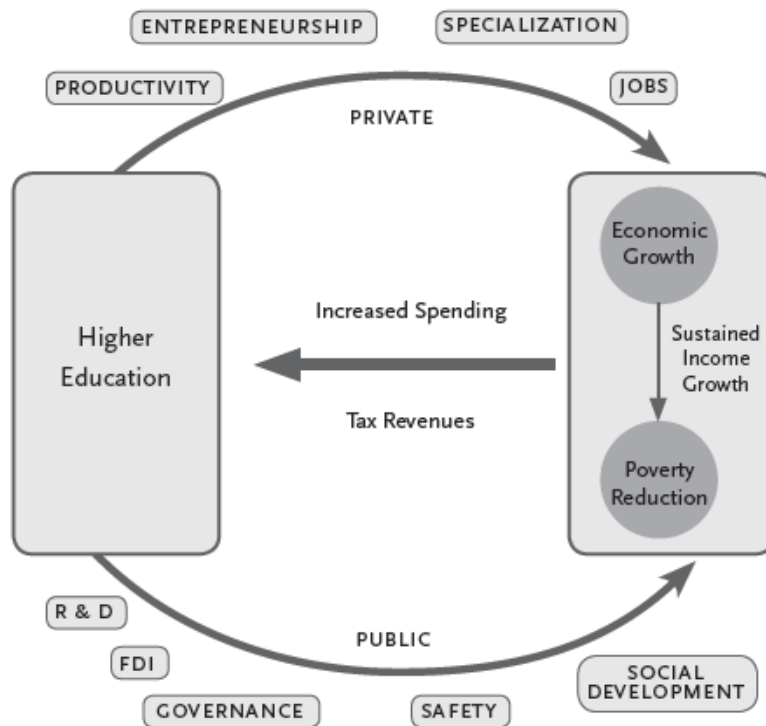
**Figure 4. Mali, 2011 – Current School Enrolment Level by Gender, Location and Relative Poverty, Ages 19-24**



Source: Team estimations using EMOP 2011-12 period 3 data

3. **The stronger growth at the secondary level in recent years provides a broader base for higher education provision, thereby potentially lifting up the entire education system as well as the economy and society.** Twenty-one percent of 19-24 year-olds have completed a secondary grade whereas this rate ranges from 4 to 7 percent for the older generations. Providing tertiary school to the secondary-educated can mean creating more teachers to transfer knowledge at the secondary and lower levels (Andrabi et al. 2013). More broadly, higher education can benefit the economy and society as a whole through various channels, as summarized in the framework in Figure 5. The channels of benefit may be identified into two groups – public and private. On the private side, individuals can gain better employment and salaries and a higher propensity to save and invest for their future. Health, quality of life and life expectancy may also improve both directly through better knowledge and behavior and indirectly through higher income. Hence private benefits over the long term are even much larger than over the short term. On the public side, higher investment in research and development, more effective absorption, application, generation and transfer of knowledge, skills and technology, increased tax revenues and consumption stimulus from the private sector, more effective political and social discourse, stronger governance and better public health are some of the channels (Bloom et al. 2014).

**Figure 5. Conceptual Framework Identifying Links Between Higher Education and Economic Development**



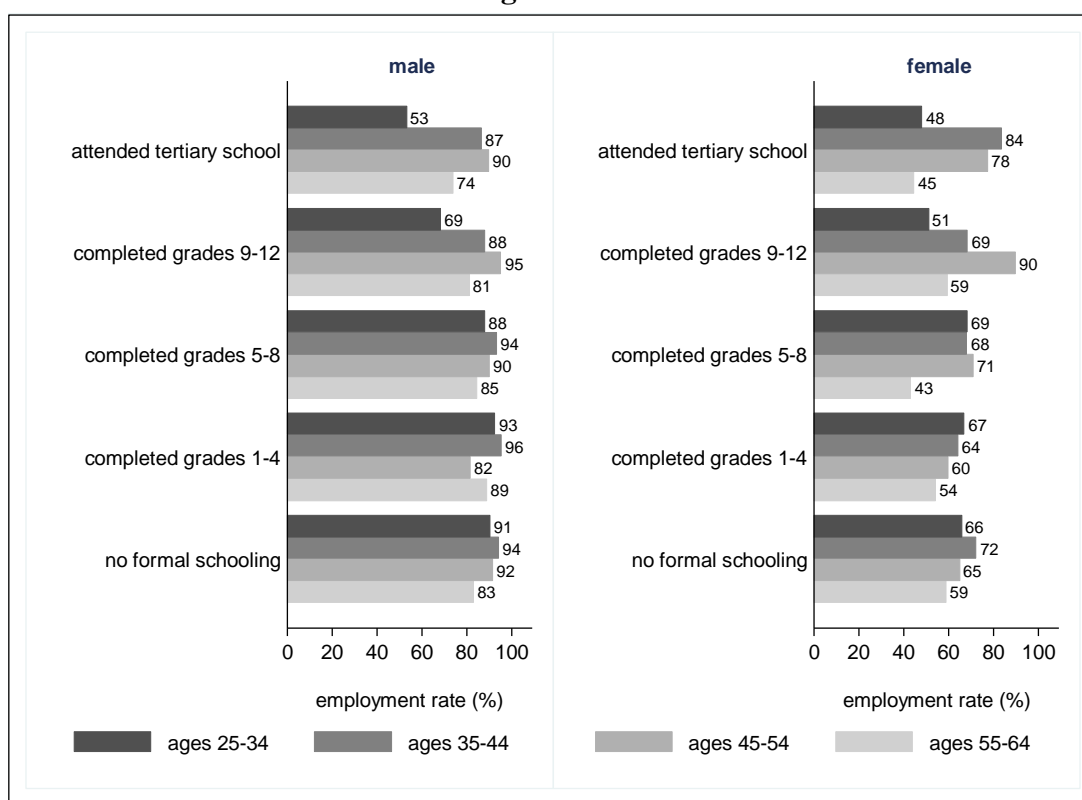
Source: Bloom et al. (2014)

4. **Employability is key to unlocking the multiple potential benefits of higher education, but many of the tertiary-educated in Mali, especially new graduates, are unemployed.** Among men who attended higher education, employment is lowest for the youngest age group (Figure 6). Only 53 percent of 25-34 year-olds are employed, and a number of possible reasons are in order: (1) inadequate knowledge and skills to get relevant jobs due to



poor education and training; (2) inadequate experience that is valued in the job market; (3) lack of jobs that match education and training; and (4) high reservation wage for the higher level of education, which is supported by relatively well-off socioeconomic circumstances and a low likelihood of having to provide for a large family. By contrast, around 80-90 percent of the three older groups who attended tertiary school are employed. In each age group and education level, women are less likely to work than men, and they are so by a significant extent in many cases. Moreover, the lower the level of education, the greater the gender divides. Therefore, higher education offers a promising venue for improved gender parity, and consequentially improved socioeconomic equity. (This analysis disaggregates employment status by gender but not by location or relative poverty, because the location and relative poverty position may be a result of the schooling level while gender may not).

**Figure 6. Mali, 2011 – Employment Status by Age, Gender and Highest Schooling Level, Ages 25-64**

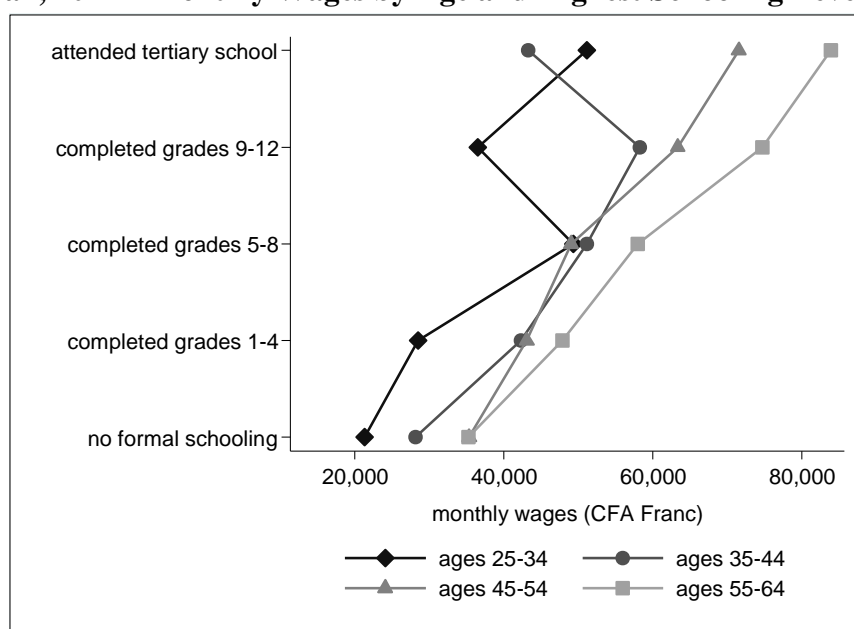


Source: Team estimations using EMOP 2011-12 period 3 data

5. Among those that are employed, there is a wage premium to higher education, as well as a wage premium to experience, and a higher wage premium to experience for the higher educated. In Figure 7, the education wage premium is indicated by the overall upward trend of the lines, whereas the experience wage premium is indicated by the overall horizontal spread from the youngest group line on the left to the oldest group line on the right. For the two younger age groups, 25-34 year-olds and 35-44 year-olds, some of the higher educated earn less than the lower educated, perhaps partly because the lower educated have accumulated more work experience and partly because of the problems related to education, training, job market and job search behavior discussed above with regards to the low employment rate of new tertiary

graduates. This puts further into question the quality and relevance of education and training at the tertiary level in Mali. Ages 35-44 may be subject to more pressure to earn income and support a family than ages 24-35, and therefore have a lower reservation wage. The left-to-right horizontal spread from younger to older generations is larger for higher levels of education, suggesting that the gains over the life time for higher levels of education are larger than for lower levels of education. In other words, higher education is an even more attractive investment over the long term than over the short term. It would be important for youth to recognize the difference between the short and long terms in making their decision on schooling. All in all, the patterns seen in unemployment and wages point to great challenges, as well as great opportunities for significant gains from higher education. (Reporting of wages is missing for many individuals who reported being employed. As a result, the sample available for analysis of wages is too small to disaggregate by gender.)

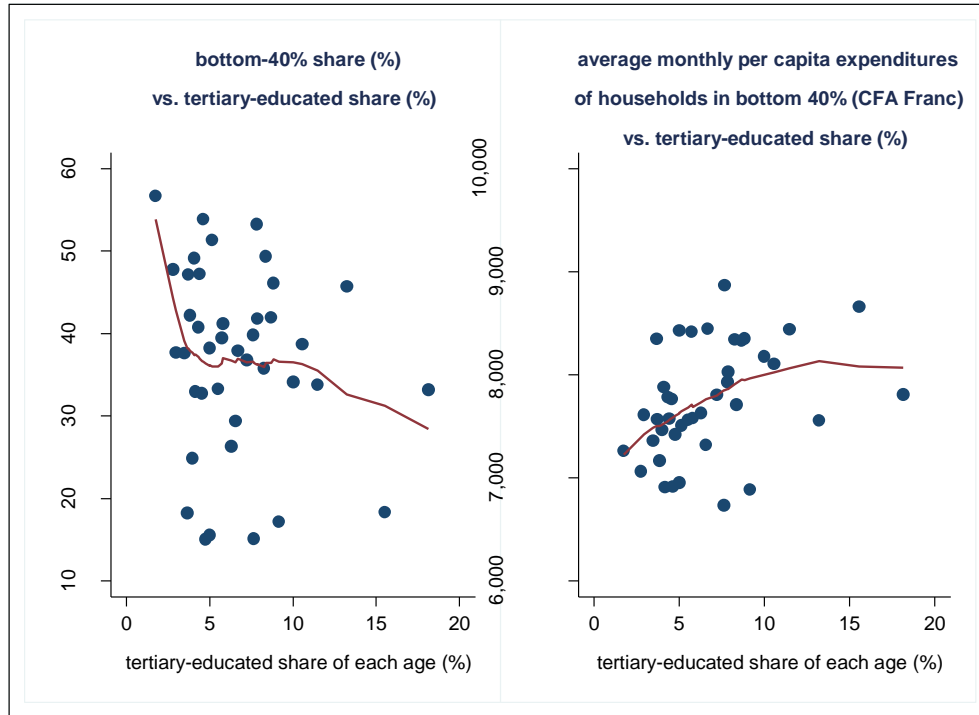
**Figure 7. Mali, 2011 – Monthly Wages by Age and Highest Schooling Level, Ages 25-64**



*Source: Team estimations using EMOP 2011-12 period 3 data*

6. **Higher education appears associated with improved shared prosperity.** A measure of shared prosperity is the welfare of households in the bottom 40 percent of household per capita consumption expenditures. On average, if a household head is tertiary-educated, the household is less likely to fall into the bottom 40 percent (Figure 8, left). At the same time, the higher the tertiary-educated share in a group, the higher the average household welfare of the poorest in that group (Figure 8, right). Despite socioeconomic disparities in access to higher education, the poorest appear to share some of the benefits. If socioeconomic disparities in access to higher education are reduced, shared prosperity may be further improved.

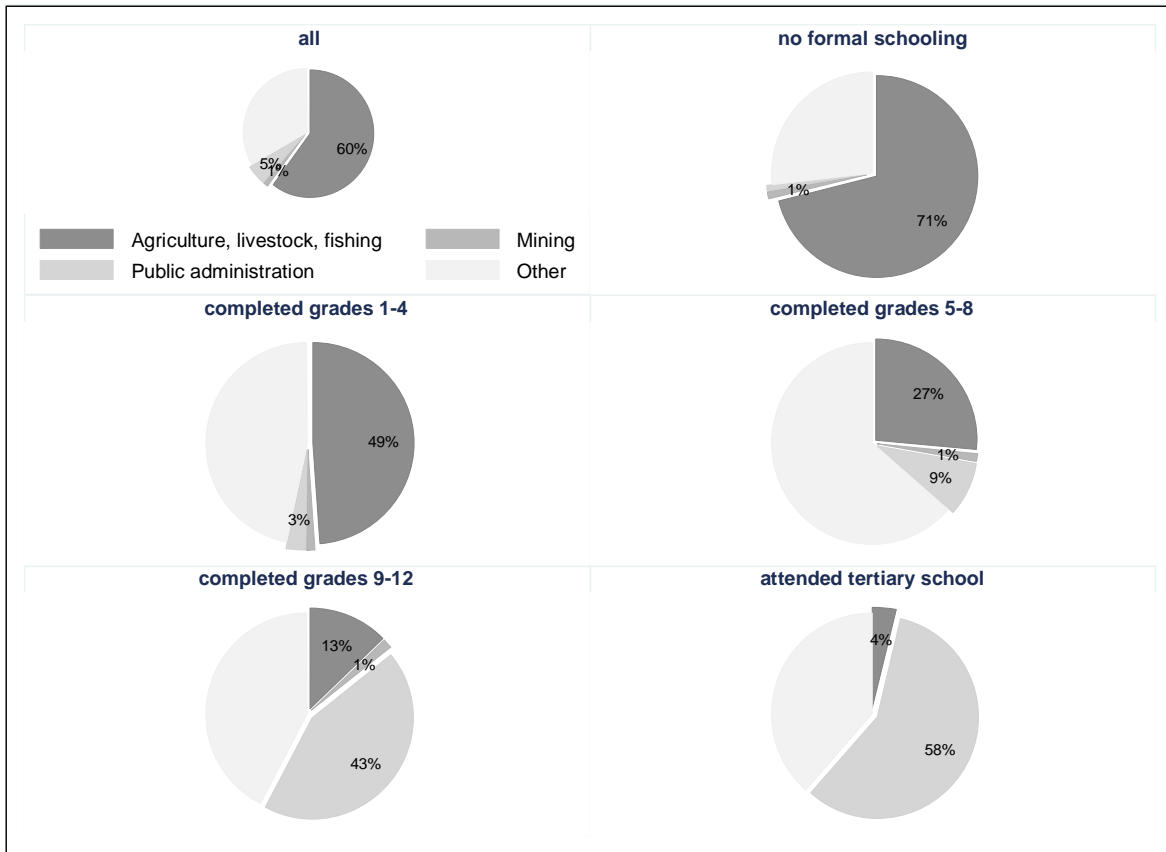
**Figure 8. Mali, 2011 – By Household Head Age, Ages 25-64: Correlation between Tertiary-Educated Share of Households and Bottom-40% Share of Households (left) and Average Monthly Per Capita Expenditures of Bottom-40% Households (right)**



Source: Estimations using EMOP 2011-12 period 3 data

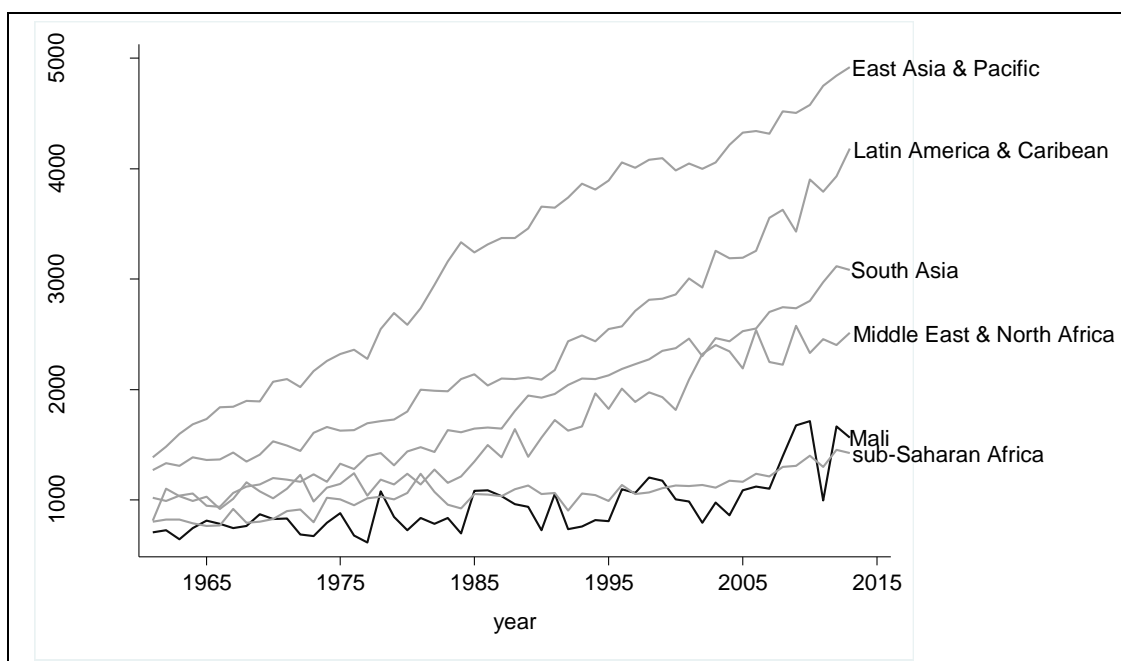
7. **Only 4 percent of the tertiary-educated in Mali work in the agriculture, livestock and mining sectors, although these sectors account for more than 40 percent of GDP and merchandise exports, and employ most of the poor, and there remains tremendous room for growth in productivity.** Employment in agriculture and mining decreases significantly as the level of education increases (Figure 9). However, productivity in these sectors in Mali trails that in the world by a far distance; as an example, Figure 10 compares levels and growths in cereal yield in Mali, sub-Saharan Africa and other regions in the world. Cereal yield in sub-Saharan Africa, including Mali, has stayed the lowest for the past 50 years, and more importantly, the gap with the other regions has grown significantly over time. At the same time, the vast majority of the poor lives in the rural sector and work in the agriculture or livestock sector in Mali. This poor performance poses great challenges for economic development, but also implies that there may be great opportunities for higher education to enhance learning and adoption and development of technology and innovations in those sectors, subject to initial production conditions as well as the functioning of markets for factors of production and markets for outputs, with positive implications for the welfare of the bottom 40 percent.

**Figure 9. Mali, 2011 – Employment by Sector and Highest Schooling Level, Ages 25-64**



Source: Estimations using EMOP 2011-12 period 3 data

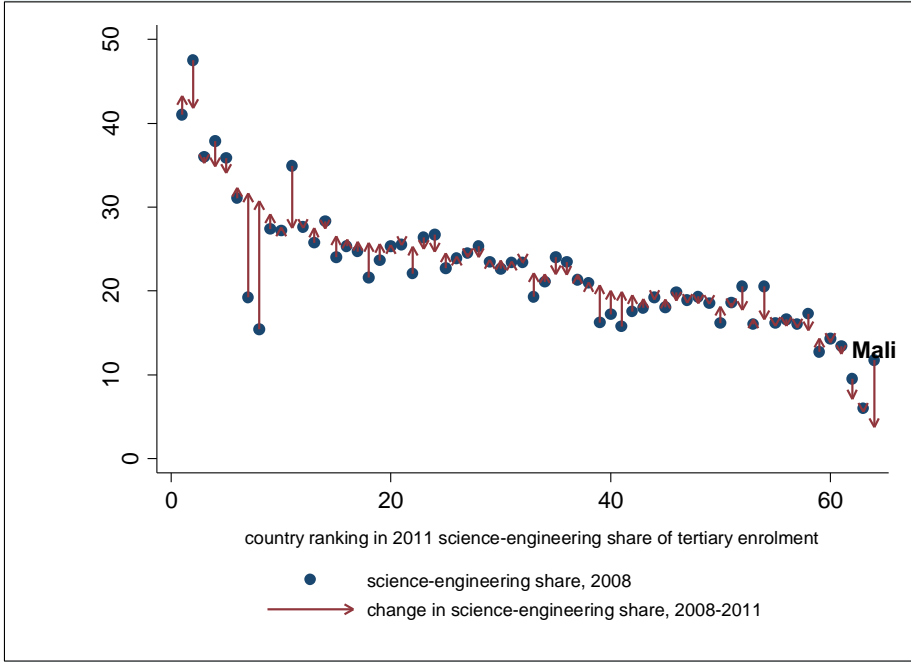
**Figure 10. Trends in Cereal Yield in Mali, Sub-Saharan Africa and Other Regions**



Source: Team estimations using World Development Indicators at [data.worldbank.org](http://data.worldbank.org) (last access November 29, 2014)

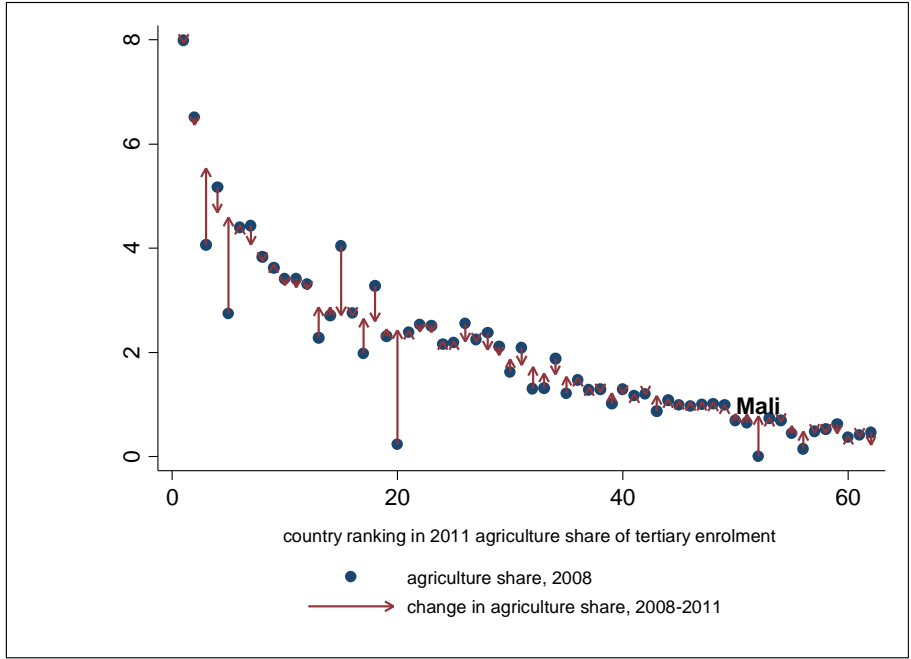
8. **There is a serious imbalance in specialization fields in higher education in Mali towards humanities and social sciences and away from science and engineering which will need to be addressed to help fulfill higher education's potential for productivity and shared growth.** The share of science and engineering in tertiary enrolment in Mali was 3.8 percent in 2011, the lowest among more than 60 countries in sub-Saharan Africa, Middle East and North Africa, East Asia Pacific, South Asia, and Latin America and the Caribbean. The share dropped by 8 percentage points from 2008, the largest decrease among the presented countries (Figure 11). Mali also ranks as the lowest 11<sup>th</sup> country in terms of agriculture share, with less than 1 percent of tertiary enrolment in the agriculture field, although this 2011 share represents an increase from virtually zero in 2008 (Figure 12). By contrast, Mali ranks highest in the share of tertiary enrolment in humanities and social sciences programs, at almost 80 percent (Figure 13). This imbalance stands in stark discord with the poor state of development of the economy in infrastructure, technology and agricultural and manufacturing productivity and the potential for poverty reduction in sectors like agriculture and livestock which would greatly benefit from relevant tertiary education programs. This imbalance may also be an important factor behind the high unemployment rate of new tertiary graduates.

**Figure 11. Level (2008) and Change (2008-11) in Science-Engineering Share of Tertiary Enrolment Across Countries**



Source: Team estimations using Education Statistics at [databank.worldbank.org](http://databank.worldbank.org) (last access November 30, 2014)

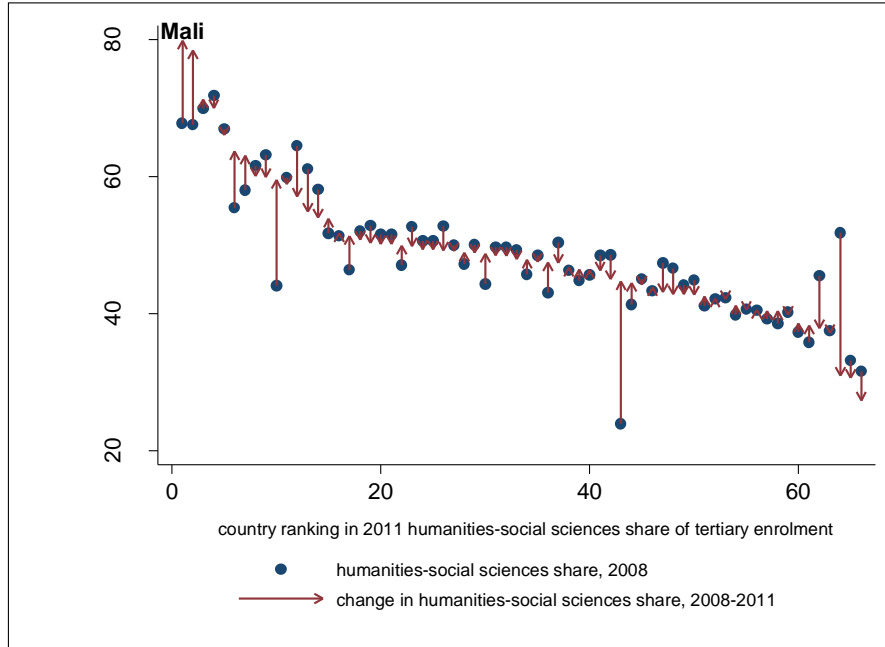
**Figure 12. Level (2008) and Change (2008-11) in Agriculture Share of Tertiary Enrolment Across Countries**



Source: own estimations using Education Statistics at [databank.worldbank.org](http://databank.worldbank.org) (last access November 30, 2014)

**Figure 13. Level (2008) and Change (2008-11) in Humanities – Social Sciences Share of**

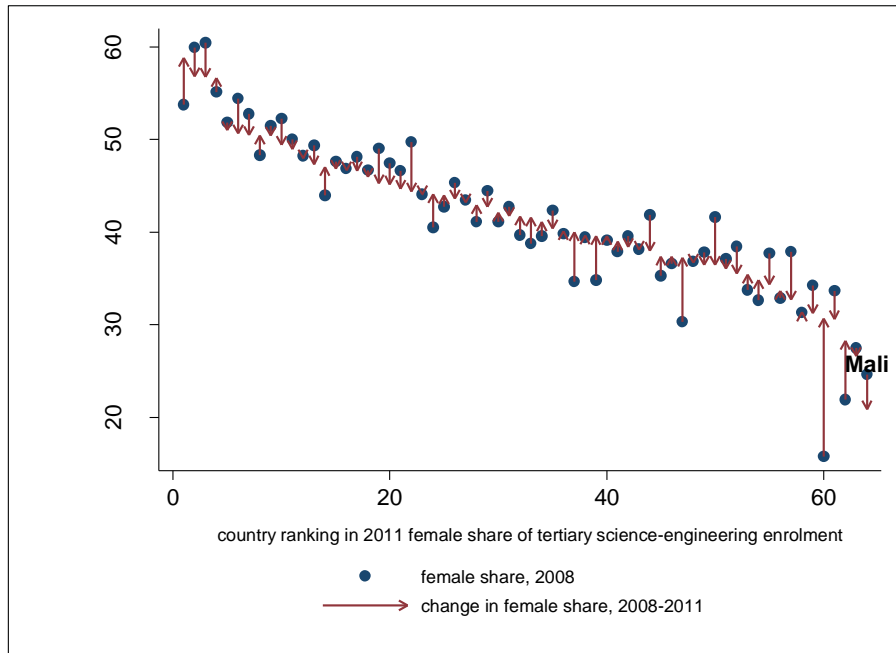
## Tertiary Enrolment Across Countries



*Source: Team estimations using Education Statistics at [databank.worldbank.org](http://databank.worldbank.org) (last access November 30, 2014)*

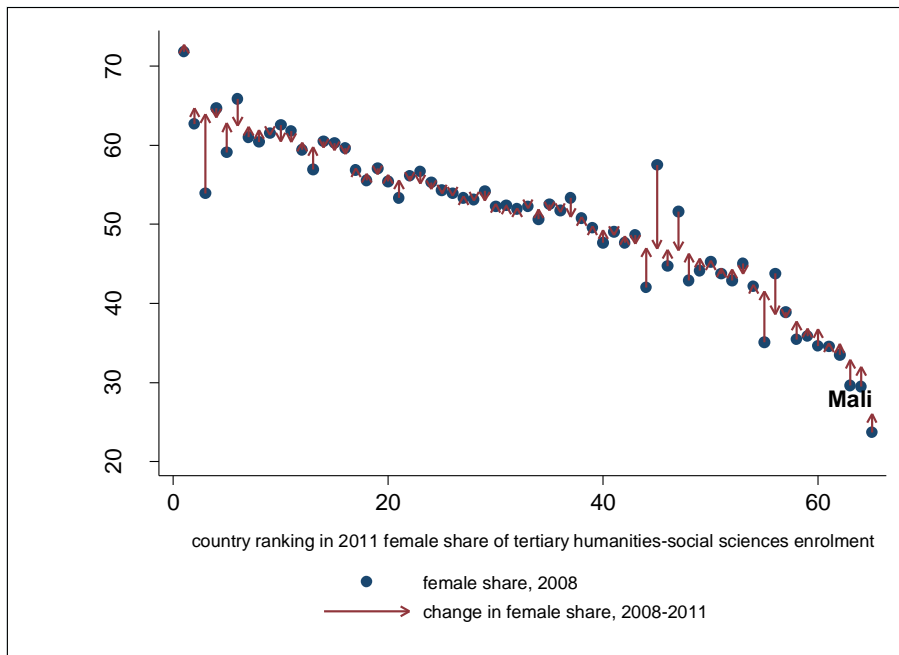
9. **The female share of enrolment in sciences and engineering programs at the tertiary level in Mali is the lowest across countries and has decreased over time.** This share was 25 percent in 2008, and decreased to 21 percent in 2011. Meanwhile, the female share of enrolment in humanities and social sciences programs at the tertiary level was 30 percent in 2008, and increased to 32 percent in 2011. Overall, Mali appears to be among those countries the largest gender disparities in tertiary school enrolment.

**Figure 14. Level (2008) and Change (2008-11) in Female Share of Tertiary Science-Engineering Enrolment Across Countries**



Source: Team estimations using Education Statistics at databank.worldbank.org (last access January 22, 2015)

**Figure 15. Level (2008) and Change (2008-11) in Female Share of Tertiary Humanities-Social Sciences Enrolment Across countries**



Source: Team estimations using Education Statistics at databank.worldbank.org (last access January 22, 2015)



## II. Cost-benefit analysis

10. **The Higher Education Support Project aims to bring higher and more sustainable returns to tertiary education in Mali, with focus on the agriculture, livestock and mining sectors.** Agriculture, livestock and mining account for more than 40 percent of Mali's GDP and merchandise exports, but only a minimal share of the population has the training and skills to advance these sectors with the adoption and generation of knowledge, technology and innovations. Beyond supporting higher enrollment in those sectors through four selected HEIs, the project will focus on two main channels of reforms to enhance the employability and earnings of students in these sectors:

- (1) Improve the adequacy, relevance and quality of inputs (such as curriculum, teachers, and materials and equipment) of the teaching-learning process
- (2) Improve system and institutional financing efficiency and management, with more effective budgetary management and institutional planning, more institutional autonomy, and better balancing between provision of support to students and revenue generation

11. **Cost-benefit analysis strongly confirms the cost-effectiveness of HESP, both for private benefits in terms of labor cash earnings (Table 1) and for private benefits in terms of household per capita consumption (Table 2).** The expected productive lifetime of an individual is considered in four age groups, due to variances in employment and wages across the age groups as shown in the sector background analysis. The stream of expected benefits is compared to the stream of expected costs (including educational expenses and opportunity costs due to working if not pursuing higher education) over the productive lifetime, as seen by an individual with secondary education, facing the decision of whether to enroll in higher education. The difference between the stream of benefits and the stream of costs is the net benefits. When considering benefits in terms of labor cash earnings, HESP is expected to improve the employment rate and wages of tertiary-educated individuals compared to secondary-educated individuals. When considering benefits in terms of household per capita consumption, HESP is expected to improve per capita consumption of households with tertiary-educated household heads compared to households with secondary-educated household heads, potentially through both wages and other channels such as behavior and investment, thereby reducing household poverty. For both wages and consumption, the Present Discounted Value (PDV) of net benefits and the Internal Rate of Return (IRR) to higher education are higher in the case with HESP than the case without HESP, given the provided assumptions on impacts of HESP on differences in employment, wages and household per capita consumption between tertiary-educated and secondary-educated individuals. Importantly, the IRRs with HESP are much higher than the discount rate, which is the deposit rate at the Mali central bank; this means that at the individual level, HESP makes higher education a greatly desirable investment.

**Table 1. Cost-Benefit Analysis for Benefits in Terms of Labor Cash Earnings**

<u>Private level</u> : Stream of expected benefits and costs over the lifetime seen by an individual with secondary education, and facing the decision of whether to enroll in tertiary education								
<u>Public level</u> : total benefits and costs of the government and individuals in the country, including private benefits and costs.								
	<b>without HESP</b>				<b>with HESP</b>			
Ages	25-34	35-44	45-54	55-64	25-34	35-44	45-54	55-64
Difference in employment rate of tertiary educated vs. secondary educated	-10%	3%	-5%	-5%	<b>0%</b>	<b>8%</b>	<b>0%</b>	<b>0%</b>
Ratio of tertiary educated wages vs. secondary educated wages	1.39	0.88	1.27	1.92	<b>1.50</b>	<b>1.20</b>	<b>1.30</b>	<b>2.00</b>
Discount rate to calculate Present Discounted Value (PDV)	3.5%				3.5%			
<b>Private level</b>								
IRR <sub>private</sub> (Internal Rate of Return on net benefits based on wages)	3.7%				<b>7.8%</b> <b>(more than twice discount rate)</b>			
PDV <sub>private</sub> (net benefits based on wages; CFA Franc)	87,970				<b>1,535,375</b>			
<b>Public level</b>								
Expected number of students benefiting from HESP					<b>20,000</b>			
Expected spillover impact on all tertiary-educated workers					<b>0.5% increase in wages for 1% increase in tertiary educated share of tertiary- and secondary-educated work force</b>			
Expected imperfect substitution and spillover impact on secondary-educated workers					<b>2% increase in wages for 1% increase in tertiary educated share of tertiary- and secondary-educated work force</b>			
Expected imperfect substitution and spillover impact on other workers					<b>2% increase in wages for 1% increase in tertiary educated share of tertiary- and secondary-educated work force</b>			
Expected approximate increase in per student monthly costs due to HESP (CFA Franc)					<b>14,000</b>			
IRR <sub>public</sub> (net benefits based on wages)	3.7%				<b>16.3%</b> <b>(almost 5 times discount rate, and more than 4 times IRR without HESP)</b>			
PDV <sub>public</sub> (net benefits based on wages; CFA Franc)	1,759,390,167				<b>151,475,278,392</b>			

Source: Team estimations using EMOP 2011-12 period 3 data, administrative data and Moretti (2004)

**Table 2. Cost-Benefit Analysis for Benefits in Terms of Household Per Capita Consumption, by Education Level of Household Head**

<u>Private level</u> : Stream of expected benefits and costs over the lifetime seen by an individual with secondary education, and facing the decision of whether to enroll in tertiary education								
<u>Public level</u> : total benefits and costs of the government and individuals in the country, including private benefits and costs.								
	<b>without HESP</b>				<b>with HESP</b>			
Ages	25-34	35-44	45-54	55-64	25-34	35-44	45-54	55-64
Ratio of household per capita consumption in households with tertiary-educated household head vs. secondary-educated household head	1.36	1.28	1.46	1.52	<b>1.50</b>	<b>1.50</b>	<b>1.60</b>	<b>1.60</b>
Discount rate to calculate Present Discounted Value (PDV)	3.5%				3.5%			
<b>Private level</b>								
IRR <sub>private</sub> (Internal Rate of Return on net benefits based on household per capita consumption)	7.1%				<b>9.9%</b> (almost 3 times discount rate)			
PDV <sub>private</sub> (net benefits based on household per capita consumption; CFA Franc)	844,015				<b>1,621,578</b>			
<b>Public level</b>								
Expected number of students benefiting from HESP					<b>20,000</b>			
Expected spillover impact on all tertiary-educated workers					<b>0.5% increase in household per capita consumption for 1% increase in tertiary educated share of tertiary- and secondary-educated work force</b>			
Expected imperfect substitution and spillover impact on secondary-educated workers					<b>2% increase in household per capita consumption for 1% increase in tertiary educated share of tertiary- and secondary-educated work force</b>			
Expected imperfect substitution and spillover impact on other workers					<b>2% increase in household per capita consumption for 1% increase in tertiary educated share of tertiary- and secondary-educated work force</b>			
Expected approximate increase in per student monthly costs due to HESP (CFA Franc)					<b>14,000</b>			
IRR <sub>public</sub> (net benefits based on household per capita consumption)	7.1%				<b>7.9%</b> (more than twice discount rate, and higher than IRR without HESP)			
PDV <sub>public</sub> (net benefits based on household per capita consumption; CFA Franc)	6,245,708,115				<b>11,214,975,117</b>			

Source: Team estimations using EMOP 2011-12 period 3 data, administrative data and Moretti (2004)

12. **HESP is also projected to significantly increase the value of higher education at the public level, even after factoring in the US\$ 33 million cost over the 5-year duration of the proposed project, and without including future generations of Malian students and public that may continue to benefit from the proposed project.** Public benefits and costs refer to the total benefits and costs seen by the government and individuals, including private benefits and costs. The sector background analysis above identifies various channels through which higher education could benefit the society and economy as a whole, through employment, earnings, behavior, entrepreneurship, investment, consumption, policy and decision making, and adoption, generation, and transfer of knowledge, skills and technology. To quantify the social benefits of higher education, estimates from Moretti (2004) for cities in the United States are used, given the dearth of estimates in general and for developing countries in particular. Moretti (2004) finds that in an economy with mostly tertiary- and secondary-educated individuals, a one percent increase in the share of college-educated workers increases wages of those with a high school education by 1.2 percent to 1.9 percent, and increases wages of those with a college degree by 0.4 percent. These are additional benefits after accounting for impact of own education on own wages.

13. It is possible that these estimates are conservative for Mali relative to U.S. cities, given the large productivity gap between Mali and the rest of the world, and the potential to transfer gains to much larger lower-educated shares of the work force in agriculture and mining, the targeted sectors of HESP. The economic analysis here therefore assumes slightly more optimistic social benefit rates than in Moretti (2004) and extend these rates to household per capita consumption based on the education level of the household head, as shown in Tables 1 and 2. The approximately 20,000 students that HESP expects to directly benefit are estimated to represent an increase of about 1 percent of tertiary- and secondary-educated workers of ages 25-34 attributable to HESP as they graduate, given the provided impacts of HESP on differences in employment, wages and household per capita consumption between tertiary-educated and secondary-educated individuals. The resulting PDVs and IRRs at the public level are found to be large for both wages and consumption, and particularly large for wages at more than CFA Franc 150 trillion and 16.3%, respectively. Note that the analysis for household per capita consumption is limited to consideration of the education level of the household head, and therefore likely an underestimation, as it does not take into account benefits associated with higher education of household members other than household heads. If the reforms under HESP are sustained and built upon in higher education as well as in the education sector overall, future generations could also benefit. Less tangible benefits other than wages and consumption, as mentioned above, could also materialize over the longer term. The total cumulative net benefits for the economy and society as a whole in the long run could be even larger than estimated here. The sensitivity analyses provided in Tables 3 and 4 show significant net gains from HESP even in the case of significantly less optimistic assumptions.

**Table 3. Sensitivity Analysis of Cost-Benefit Analysis with Implementation of HESP, for Benefits in Terms of Labor Cash Earnings**

	Scenario 1				Senario 2			
Ages	25-34	35-44	45-54	55-64	25-34	35-44	45-54	55-64
<b>Difference in employment rate of tertiary educated vs. secondary educated</b>	<b>0%</b>	<b>8%</b>	<b>0%</b>	<b>0%</b>	<b>-5%</b>	<b>6%</b>	<b>-2%</b>	<b>-2%</b>
Ratio of tertiary educated wages vs. secondary educated wages	1.50	1.20	1.30	2.00	1.50	1.20	1.30	2.00
<b>Private level</b>								
IRR <sub>private</sub> (Internal Rate of Return on net benefits based on wages)	7.8%				6.9%			
PDV <sub>private</sub> (net benefits based on wages; CFA Franc)	1,535,375				1,238,613			
<b>Public level</b>								
IRR <sub>public</sub> (net benefits based on wages)	16.3%				11.2%			
PDV <sub>public</sub> (net benefits based on wages; CFA Franc)	151,475,278,392				85,791,075,799			

Source: Team estimations using EMOP 2011-12 period 3 data, administrative data and Moretti (2004)

**Table 4. Sensitivity Analysis of Cost-Benefit Analysis with Implementation of HESP, for Benefits in Terms of Household Per Capita Consumption**

	Scenario 1				Scenario 2			
Ages	25-34	35-44	45-54	55-64	25-34	35-44	45-54	55-64
Ratio of household per capita consumption in households with tertiary-educated household head vs. secondary-educated household head	<b>1.50</b>	<b>1.50</b>	<b>1.60</b>	<b>1.60</b>	<b>1.45</b>	<b>1.40</b>	<b>1.55</b>	<b>1.55</b>
<b>Private level</b>								
IRR <sub>private</sub> (Internal Rate of Return on net benefits based on household per capita consumption)	9.9%				8.7%			
PDV <sub>private</sub> (net benefits based on household per capita consumption; CFA Franc)	1,621,578				1,291,319			
<b>Public level</b>								
IRR <sub>public</sub> (net benefits based on household per capita consumption)	7.9%				6.4%			
PDV <sub>public</sub> (net benefits based on household per capita consumption; CFA Franc)	11,214,975,117				7,192,738,472			

Source: Team estimations using EMOP 2011-12 period 3 data, administrative data and Moretti (2004)

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## **Annex 7: Implementation Support Plan**

### **Republic of Mali: Higher Education Support Project**

#### **Strategy and Approach for Implementation Support**

1. The implementation support strategy is based on the complexity of project design, risks, and implementation arrangements. Project implementation support strategy is based on: (i) a close implementation supported by a country-based task team; (ii) semi-annual and annual reviews; and (iii) technical support missions, as well as on a more coordinated approach with other projects supporting the sub-sector.

2. **Close implementation support:** The task team, including the TTL, the procurement and financial management specialists, is based in the country. It will provide a close and regular monitoring of the implementation of the project and will handle a regular policy dialogue to forecast possible issues and propose solutions as needed. At the beginning of the project implementation (first six months), weekly meetings will be organized with the project team and the DNEERS to monitor the progress towards achieving the project development objective. Then, monthly meetings will be organized to focus on areas which need close monitoring and troubleshooting.

3. **Semi-annual and annual reviews:** Twice a year, in April and November of each year, the task team and the Government will organize a joint-review meeting to assess the progress made so far, identify the difficulties in the implementation of the project and agree on the measures to overcome them. It is crucial to ensure the timing of these two annual missions to coincide with the timing for the DLIs assessment and the beginning of the planning of the next academic year (April), and then in November after the launch of the new academic year when it is more appropriate to assess HEIs enrollments and performance.

4. **Technical support missions:** Technical support missions will be carried out in specific areas where international expertise is needed to guarantee the quality of results or reinforce the technical capacities at the national level. These missions' tasks will be, but not limited, to the following fields: ICT development and architecture design supervision linked to sector data generation and analysis (including HE private sector); support to HEIs' governance including assessment of HEIs and the revision of IDPs, implementation of the quality assurance mechanisms; and implementation of the new programs; procurement and financial management.

5. **Financial management implementation support plan:** is based on the outcome of the FM risk assessment and detailed in Annex 3. The objective of the implementation support plan is to ensure the project maintains a satisfactory financial management system throughout the project's life. As the project's FM residual rating is deemed **Substantial**, the Bank FM team will conduct supervision missions on a semester basis. The first FM review will thus be carried out within six months of Project effectiveness. This detailed review will cover all aspects of FM, internal control systems, and overall fiduciary control environment. Thereafter, the decision to undertake on-site supervision will be based on risk- initially on the risk rating in the PAD and subsequently on the updated FM risk rating during implementation.

6. Based on the outcome of the FM risk assessment, the following implementation support will be provided:

<b>FM Activities</b>	<b>Frequency</b>
<b>Desk reviews</b>	
Interim financial reports review	Quarterly
Audit report review of the project	Annually
Review of other relevant information such as interim internal control systems reports.	Continuous as they become available
<b>On site visits</b>	
Review of overall operation of the FM system	Bi-annual (Implementation Support Mission)
Monitoring of actions taken on issues highlighted in audit reports, auditors' management letters, internal audit and other reports	As needed
Transaction reviews (if needed)	As needed
<b>Capacity building support</b>	
FM training sessions	As needed

7. **Procurement:** two procurement specialists have been assigned for the project; they will be trained so as to be able to provide training and coaching to HEIs not familiar with World Bank procedures. The two staff will benefit from the Ministry of Basic Education fiduciary team, which has the experience and knowledge on Bank procedures.

8. **Safeguards:** Environment and social specialists' intervention will be required to supervise the adequate consideration of safeguards issues during project implementation.

### **Implementation Support Plan**

9. The following tables summarize areas to be supported and skills and resources needed.



**Table 1: The main focus in terms of support during project implementation**

<b>Time</b>	<b>Focus</b>	<b>Skills Needed</b>	<b>Resource Estimate</b>
First twelve months	Implementation of the NQAA and development of HEI assessment tools and plans	Higher education specialist	3
	Development and implementation of the MIS	M&E/ICT specialist	2
	Monitoring of IDPs and Development of new programs	Higher education curriculum specialist	4
	Team Leadership	TTL	14
12-48 months	Implementation of the new HEI assessment tools and plans	Higher education specialist	2
	Implementation of the NQAA	M&E/ICT specialist	2
	Development and implementation of the MIS	Higher education curriculum specialist	4
	Monitoring of IDPs and Development of new programs		4
	Team Leadership, safeguards, and fiduciary team	Environment Fiduciary team TTL	1 4 14
Other			

**Table 2: Skills Mix Required**

<b>Skills Needed</b>	<b>Number of Staff Weeks</b>	<b>Number of Trips</b>	<b>Comments</b>
Team Leader	14 SW annually		Country office-based
Higher Education Specialist	12 SW annually	3	International consultant
Procurement	4 SW annually		Country office-based
Financial Management Specialist	4 SW annually		Country office-based
ICT Specialist	4 SW annually	2	International consultant
Environment Specialist and Social Specialist	2 SW annually		Dakar office-based

**Table 3: Partners**

<b>Name</b>	<b>Institution/Country</b>	<b>Role</b>
UNESCO	Multilateral agency	ICT and QA
The Netherland Embassy in Mali-Nuffic	The Netherlands	ICT, QA, and governance
West African Monetary Union	UMEOA	ICT and new programs
French Embassy in Mali	France	Technical support

## Annex 8: Sector Context

### Republic of Mali: Higher Education Support Project

1. Skills constraints in all sectors of the economy are largely the product of insufficient education and training and/or low quality of education and training in Mali. Between 2004 and 2010, Mali made significant progress in basic education: the primary education gross enrollment rate (GER) increased from 72 percent in 2004 to 82 percent mainly due to the momentum generated and maintained by the Millennium Development Goals (MDGs) agenda; access to secondary and tertiary education also increased from 12 to 34 percent, and from 4 to 5 percent, respectively, during the same period. However, progress was hampered by the impact of the crisis which affected social sectors, including education which experienced a significant decline in enrollment indicators: in particular the primary education GER declined to 69 percent in 2013, while the primary completion rate decreased from 58 percent in 2010 to 48 percent in 2013. Equity is also a concern with secondary and tertiary education benefitting largely the upper income quintiles.
2. Of even more concern are issues related to the low quality and relevance of learning at all levels of education, as illustrated by results of the 2011 national student assessment which showed that less than 20 percent of students completing six grades of primary school have the required skills, and highlighted poor labor market outcome indicators among upper secondary and post-secondary education graduates. Although declining along the life cycle, those graduates have unemployment rates close to 30 percent which, in combination with the modern sector's employers' complaints on difficulties in finding individuals with the right skills for many occupations as per the ICAs, point to lack of relevance of education and training provided to the needs of the formal sector.
3. The issues described above are, in large, a result of poor teaching and an inadequate learning environment which are, to a large extent, symptomatic of pervasive inefficiencies in the utilization of resources and broader overall governance gaps in the education and training sector. As confirmed by the 2014 Report on the Future of Higher Education in Mali<sup>20</sup>, these issues are particularly pronounced in tertiary education, which is not fulfilling its role of provider of high level skills in Mali – greatly limiting the potential for economic diversification, productivity and growth.
4. Indeed, employability is key to unlocking the multiple potential benefits of higher education, but many of those individuals with a tertiary education in Mali, especially new graduates, are unemployed. Only 53 percent of 25-34 year-olds are employed. Inadequate knowledge and skills to obtain relevant jobs due to poor education and training are major contributing factors. The share of science and engineering in tertiary enrolment in Mali was 3.8 percent in 2011, the lowest among more than 60 countries in SSA, Middle East and North Africa, East Asia Pacific, South Asia, and Latin America and the Caribbean. With regards to tertiary education enrollment in agriculture, Mali rank has one of the lowest rates (ranking 11<sup>th</sup> from the bottom). By contrast, Mali ranks highest in the share of tertiary enrolment in humanities and social sciences programs, at almost 80 percent. The demographic trends in Mali have led to a significant increase in higher

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<sup>20</sup> Rapport général de la Concertation Nationale sur l'Avenir de l'Enseignement Supérieur au Mali; CNAES-Mali, Mai 2014.

education enrollments. Twenty-one percent of 19-24 year-olds have completed a secondary education whereas this proportion is between 4 to 7 percent among older generations. The younger generations are now increasingly in demand of further training. This trend will continue in the coming decades and the higher education system should prepare for this by employing immediate measures to enhance its efficiency and increase the likelihood of youth employment.

5. In order to strengthen and to fully unlock its potential for change, the higher education system faces many challenges which are interconnected and require urgent action for immediate results that are described below.

6. **The Mali tertiary education sub-sector is largely public**, with a number of universities and high level teaching institutions (technical institutes and *grandes écoles*) concentrated in Bamako. In 2011, the young but oversized University of Bamako created in 1995 was dismantled and four new universities were created based on the existing overcrowded faculties: namely, the University of Social Studies and Management (*l'Université des Sciences Sociales et de Gestion de Bamako* - USSGB); the University of Science and Technology (*l'Université des Sciences, Techniques et Technologies de Bamako*-USTTB); the University of Social Studies and Humanities (*l'Université des Lettres et Sciences Humaines de Bamako* - ULSHB); and the University of Legal and Political Science of Bamako (*l'Université des Sciences Juridiques et Politiques de Bamako* - USJPB). Overall, the public Higher Education Institutions (HEIs) comprise five universities (the four new universities in Bamako) and the University of Segou (*l'Université de Ségou* - UOS) created in 2010), and four technical institutes and *grandes écoles*<sup>21</sup>, with a total of approximately 110,000 students in 2012-2013, while the 70 approved private HEIs cater to an additional 5,000 students. Eight out of the nine HEIs are located in the capital city and account for 99 percent of students.

7. **The tertiary education system lacks institutional, program and degree diversification.** Enrollment in public HEIs accounts for more than 95 percent of total enrollments at the tertiary level, thus becoming a *de facto* monopoly, and more than two-thirds of students are enrolled in Law and the Humanities. The lack of private options and limited provision of Science, Technology, Engineering, and Math (STEM) courses (skills), symptomatic of a poor regulatory and information framework and weak university governance, greatly constrains the supply of skills available to key sectors of the economy. There are also an insufficient number of opportunities to obtain short technical degrees that lead to professionalization. Increasing Science and Technology (S&T) offerings and introducing new and better programs and degrees, while fostering higher participation of private HEIs, would help HEIs respond to challenges related to relevance and quality.

8. **The tertiary education system's institutional and program licensing process constrains quality and relevance of courses:** The HEI accreditation process uses external resources such as the African Higher Education Council (*Conseil Africain et Malgache de l'Enseignement Supérieur* -CAMES) to deliver accreditation of institutions which are valid for few years and renewable. Until now, only a few private HEIs have undergone the accreditation process which has allowed them to receive national recognition and attract more international students.

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<sup>21</sup> Ecole Nationale des Ingénieurs (ENI), *Ecole Normale Supérieure (EnSup)*, Ecole Nationale d'Enseignement Technique et Professionnelle (ENETP), and l'Institut Polytechnique Rural de Formation et de Recherche Appliquée (IPR/IFRA).

However, after the first accreditation, no renewals have been requested after the four year period ended. Program licensing is ruled by a 2006 Decree<sup>22</sup>, which defines an independent national body appointed by the MoHE. It operates under the *Direction Générale de l'Enseignement supérieur et de la Recherche Scientifique* (DNESRS). The independent body – the *Commission Nationale d'Habilitation* – analyzes the information provided by the requesting HEI and makes a recommendation to the MoHE. The limited monitoring of programs implemented by the MoHE and the DNESRS limits the incentive of HEIs to renew their programs and adapt them to the evolving labor market.

**9. Pedagogical inputs and innovation are limited:** There is inadequate emphasis on pedagogical inputs such as books and scientific documentation, ICT, laboratory equipment and supplies, research activities, staff recruitment and development, and investment in infrastructure. The situation is compounded by uncontrolled admissions<sup>23</sup> which, adding to the high repetition rates during the two first years of schooling, results in overcrowding.

10. Private premises were rented in most cases to host the new universities exacerbating the overcrowding of universities, which has led in many cases to low internal efficiency. For example, the most crowded university (USJPB – which provides training in Law), had 30,000 students enrolled in 2012/2013 while the UOS had 846 students with a first year failure rate above 80 percent. In 2013, the Government paid FCFA650 million (US\$1.4 million) to rent space to hold courses (lectures), as available space was inadequate.<sup>24</sup>

11. Accounting for all teachers including secondary teachers (which account for more than 50 percent of tertiary education teachers), the teacher-student ratio stood at 1:160 in 2012/2013.<sup>25</sup> A better allocation of resources and enhanced institutional diversification (see below) would enable HEIs to improve the teacher-student ratio to reasonable levels and acquire pedagogical inputs so as to increase internal and external efficiency and improve the country's public financing of higher education.

12. To date, there is no comprehensive staff development plan to meet the present and future teaching needs and quality requirements. There are a few trained PhD graduates who benefitted from uncompetitive distributed bilateral scholarships, but attempts to create graduate programs at the former University of Bamako have been frustrated by the lack of a critical mass of qualified faculty to run graduate programs as well as the absence of an atmosphere conducive to research. This is compounded by capacity and information gaps at the system level. Training faculty and post-graduate students to become qualified teachers while building partnerships with international HEIs such as those participating in the ACE Project would support the introduction of greater innovation and enhance pedagogical inputs.

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<sup>22</sup> Décret No06-395/P-RM du 19 septembre 2006. The term “licensed Program” is referring to “Programme Habilités” by a National body as described in the above mentioned Decree and “Accredited program” would be used for programs accredited by a regional body such as CAMES.

<sup>23</sup> An additional 16,000 new entrants are expected in the first year of university in 2014-2015 based on the results of the baccalaureate.

<sup>24</sup> Sometimes theaters or meeting rooms are rented from private owners.

<sup>25</sup> There are wide variations between faculties and schools: 1:200 in Law and Economics, 1:100 in the Humanities, and 1:8 in the school of engineering. When considering only qualified teachers, the ratio is even poorer: 1:1,000 in Law to 1:500 in Humanities, and 1:74 in technical fields.

**13. The sector is plagued by systemic and institutional governance gaps:** The lack of pedagogical inputs is indicative of poor resource utilization. Indeed, the bulk of the budget is allocated to students' welfare and extra teaching hours at the expense of pedagogical inputs. This is due, in part, to a scholarship system that absorbs the largest share of the sub-sector budget. The scholarship budget accounted for 56 percent (FCFA18.5 billion, equivalent to US\$40 million) of the total higher education budget in 2013. It has been increasing at an unsustainable rate (10 percent annually) due to the rapid growth of high school graduates that are admitted automatically to the university and granted a scholarship (independently of income), and the lack of a management system to effectively monitor enrolments and scholarship provision. In addition, supplement paid for additional teaching hours accounted for more than FCFA2 billion (US\$4.2 million) in 2013. The existing admission and scholarship policies increase the lack of accountability of faculties and HEIs leading to poor management, which impact severely on the quality of learning, thus leading to unemployment of graduates. Improving the financing structure would allow HEIs to increase their own budgets for pedagogical inputs and innovations.

14. Additionally and related to the above, there are no performance standards for HEIs, they have limited institutional autonomy (although a reform on this aspect is on-going), and are not accountable for results. University rectors and institute directors are appointed by the Government; they report to the Minister of Higher Education instead of the Board of the university/institutes (members of which are civil servants appointed by the Government). Deans are elected by teachers; thus university rectors have limited power for deans to cater to the university interests. All important issues are dealt with at the government level as the university and the institutes cannot engage in business, and make investments and/or personnel decisions such as hiring, firing, determining compensation, conducting consequential evaluation of performance, etc. Therefore, HEIs are part of the civil service administration and run as normal departments of the MoHE. Recruitment of teaching staff is organized by the Ministry of Civil Service and the MoHE determines the academic schedule and admissions criteria for students are without taking into account availability of teaching staff and resource limitations. This situation has resulted in recurrent and long-lasting teacher and student strikes, reducing substantially the academic year and negatively affecting learning outcomes. Improving institutional autonomy while increasing accountability would enable HEIs to professionalize their management and look for alternatives to increasing the internal collection of revenue (including, for example, by introducing student fees).

15. Finally, the higher education sector system suffers from the lack of a comprehensive regulatory and financing framework to support the development of private HEIs and university-industry linkages. Despite the existence of an accreditation system for private HEIs, there is no incentive or regulation in place to allow private HEIs to access land or financing facilities (private or public). Improving incentives for the participation of private HEIs would help Mali diversify its program offerings.

**16. Government Efforts to Reform Higher Education:** The Government of Mali has developed and implemented a comprehensive ten-year program (2002-2013) (*Programme décennal de l'éducation – PRODEC*) which addresses the education sector bottlenecks while laying the foundations for sector quality improvement. With the closing of the ten-year program in December 2013, the sector has developed an Interim Program for the period 2014-2016, while

drawing lessons from implementation of the program and conducting a full sector review to develop a new program.

17. In addition to discussing the status of the education system, the 2014 Forum on the future of higher education<sup>26</sup> (supported by Economic Community of West African States-ECOWAS) also strived to forge a consensus on the necessary reforms. Participants in both forum and the 2008 National Forum on Education (NFE) recognized the negative impact that institutionalized, recurrent and de facto predictable strikes and poor governance have on the quality of education. These two meetings concluded that systemic changes were needed to: (i) improve quality and increase the internal efficiency and relevance of higher education; (ii) move away from the ritual of annual strikes, followed by lengthy negotiations and the signing of protocol agreements which contain financial obligations the Government cannot fulfill; (iii) put in place a financing system that is compatible with public finance parameters and has leveraging capacity to enable the expansion and performance of the higher education system; and (iv) introduce a regulatory framework that attracts private sector investment in higher education. The Government has prepared, as a follow up to the 2008 NFE recommendations, a National Policy on Higher Education and Scientific Research<sup>27</sup> approved in 2010 that incorporates these principles but stills needs to be translated into an action plan for implementation.

**18. Other Partners and World Bank Group Projects:** the World Bank is currently providing support to the education sector through two operations: (i) The Emergency Education for All (EFA) Project in the amount of US\$41.7 million funded by the Global Partnership for Education (GPE) which aims to increase access and improve the learning environment for affected students due to the country's recent crisis; and (ii) the Skills Development and Youth Employment Project in the amount of US\$63 million, which focuses on supporting education and training programs for youth employability and private sector led job opportunities in Mali targeting basic and intermediate skills in economic sectors such as fruits and vegetables, animal products (meat, milk, and skin products), construction, mining and auxiliary services, artisanal programs and ICT.

19. The Netherlands is in the process of implementing a five-year project (the Netherlands Postsecondary Education Capacity Building Project (NICHE)) in the amount of Euro 3 million, for the period 2014-2018. The NICHE aims at improving HEIs governance and diversifying in-service training opportunities. The NICHE will focus on eight public HEIs<sup>28</sup> providing support to governance and management with an emphasis on gender, in-service training programs, and creation of enterprises. The project was launched in September 2014.

20. The Canadian Cooperation, through The University of Laval, is in the process of designing a non-solicited project aimed at improving resilience to food shortage. It is expected to include a component that will focus on improving relevance of programs in agriculture at the IPR of Katibougou along with four other TVET institutions. The process is in the inception stage. The African Development Bank (AfDB) and the United Nations Education, Scientific and Cultural

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<sup>26</sup> *Forum national sur l'avenir de l'enseignement supérieur au Mali.*

<sup>27</sup> *Document de Politique Nationale de l'enseignement supérieur et de la recherche scientifique (Avril 2010)*

<sup>28</sup> The eight HEIs to be supported by the NICHE Project are: USJPB, USSGB, USTTB, US, ENI, ENETP, *Institut des Hautes Etudes Islamiques (IHERI)*, and IPRK.

Organization (UNESCO) have been partnering with ECOWAS and the University of Quebec at Montreal (UQAM) to support universities in participating countries, including Mali, to develop new programs in selected areas and develop eLearning system to provide quality learning and tools for greater access to tertiary education.

21. In this overall sector and strategic context, the proposed Higher Education Support Project (HESP) will support the development of high and intermediate level skilled workers needed to complete some critical value-chains in agriculture, livestock, and mining and auxiliary services, therefore enhancing the potential of Mali's economy for diversification, productivity and employment. The Project will complement and strengthen Bank-funded national and regional projects in agriculture, livestock including pastoralism in the Sahel, mining, skills development, electricity and communication, by supporting high level training programs in agribusiness and livestock, construction, communication, and engineering. Relevant IDA-funded projects (ongoing or under preparation) include: the *Programme de Compétitivité et de Diversification Agricole (PCDA)*, the *Projet d'Accroissement de la Productivité Agricole (PAPAM)*; the *Projet d'Electrification Domestique et Accès aux Services Sociaux de Base (PEDASB)*, the *Projet Régional d'Amélioration de la Productivité Agricole (WAAPP)*, the *Projet de Télécommunication dans le Sahel (WARSHIP)*, and the *Projet Régional d'Appui au Pastoralisme dans le Sahel*.

22. The proposed higher education support operation will take advantage of the ongoing ACE Project to build synergies and foster more collaboration in key areas identified by HEIs in Mali including, among others: teacher training; curriculum design and implementation; and research.





# MAP

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## MALI

<ul style="list-style-type: none"> <li>○ SELECTED CITIES AND TOWNS</li> <li>⊙ PROVINCE CAPITALS</li> <li>⊕ NATIONAL CAPITAL</li> <li> RIVERS</li> </ul>	<ul style="list-style-type: none"> <li> MAIN ROADS</li> <li> RAILROADS</li> <li> REGION BOUNDARIES</li> <li> INTERNATIONAL BOUNDARIES</li> </ul>
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