**FOR OFFICIAL USE ONLY**

Report No: PAD3393

INTERNATIONAL DEVELOPMENT ASSOCIATION

Project Appraisal Document

ON PROPOSED CREDITS

TO THE

REPUBLIC OF BENIN IN THE AMOUNT OF eur 1.9 Million (US$2.0 MILLION EQUIVALENT)

REPUBLIC OF NIGER IN THE AMOUNT OF Eur 4.6 Million (US$5.0 MILLION EQUIVALENT)

Federal REPUBLIC OF NIGERia IN THE AMOUNT OF SDR 55.1 Million (US$75.0 MILLION EQUIVALENT)

REPUBLIC OF TOGO IN THE AMOUNT OF EUR 11.0 Million (US$12.0 MILLION EQUIVALENT)

AND PROPOSED GRANTs

To The

REPUBLIC OF BENIN IN THE AMOUNT OF SDR 3.0 Million (US$4.0 MILLION EQUIVALENT)

REPUBLIC OF THE GAMBIA IN THE AMOUNT OF SDR 8.9 Million (US$12.0 MILLION EQUIVALENT)

REPUBLIC OF NIGER IN THE AMOUNT OF SDR 7.4 Million (US$10.0 MILLION EQUIVALENT)

REPUBLIC OF TOGO IN THE AMOUNT OF SDR 4.5 Million (US$6.0 MILLION EQUIVALENT)

association of african UNIVERSITIES IN the amount of SDR 3.7 million

(US$5 million Equivalent)

FOR A

SECOND AFRICA HIGHER EDUCATION CENTERS OF EXCELLENCE FOR DEVELOPMENT IMPACT PROJECT

November 5, 2019

Education Global Practice

Africa Region

This document has a restricted distribution and may be used by recipients only in the performance of their official duties. Its contents may not otherwise be disclosed without World Bank authorization.

|  |
| --- |
| CURRENCY EQUIVALENTS |
| Exchange Rate Effective September 30, 2019 |
|  |
| |  |  | | --- | --- | | Currency Unit = | United States Dollar | | The Gambian Dalasi (GMD) 50.16 = | US$1 | | Nigerian Naira (NGN) 361.5 = | US$1 | | West Africa CFA Franc (Benin, Niger, Togo) (XOF) 601.83 = | US$1 | | SDR 0.733 = | US$1 | | EUR 0.916 = | US$1 | |
| FISCAL YEAR |
| January 1 - December 31 |

|  |  |
| --- | --- |
| Regional Vice President: | Hafez M. H. Ghanem |
| Regional Integration Director: | Deborah Wetzel |
| Education Global Director: | Jaime Saavedra Chanduvi |
| Regional Directors: | Dena Ringold and Amit Dar |
| Practice Manager: | Halil Dundar |
| Task Team Leaders: | Ekua Nuama Bentil, Himdat Bayusuf |

|  |
| --- |
| **ABBREVIATIONS AND ACRONYMS** |
|  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | AAU | Association of African Universities | | ABU | Ahmadu Bello University, Nigeria | | ACE | Africa Center of Excellence | | ACE I | Africa Higher Education Centers of Excellence Project I | | ACE II | Africa Higher Education Centers of Excellence Project II | | AFD | French Development Agency (*Agence Française de Développement*) | | ANR | National Research Agency (*Agence Nationale de la Recherche*) | | BMBF | German Ministry of Education and Research (*Bundesministerium für Bildung und Forschung*) | | BPP | Bureau of Public Procurement | | BSU | Benue State University, Nigeria | | BUK | Bayero University, Kano, Nigeria | | C2EA | Africa Center of Excellence for Water and Sanitation (*Centre d’Excellence Africain pour l’Eau et*  *l’Assainissement*) | | CBA | Cost-benefit Analysis | | CCBAD | Africa Center of Excellence for Biodiversity and Sustainable Agriculture (*Centre d’Excellence*  *Africain sur les Changements Climatiques, la Biodiversité et l’Agriculture Durable*) | | CEA-CERPP | Africa Center of Excellence for Pastoral Productions: Meat, Milk, Leather and Skins (*Centre*  *d’Excellence Régional sur les Productions Pastorales : Viande, Lait, Cuirs Et Peaux*) | | CEA-IEA-MS4SSA | Africa Center of Excellence for Innovative Teaching/Learning of Mathematics and the Sciences  for Sub-Saharan Africa (Centre Innovant d’Enseignement/Apprentissage des Mathématiques  et Sciences pour l’Afrique sub-saharienne) | | CEA-SMIA | Africa Center of Excellence for Mathematical Sciences, Computer Science and Applications  (*Centre d’Excellence Africain en Sciences Mathématiques, Informatique et Applications*) | | CEFOR | Center of Excellence in Oil Fields Chemical Research | | CERME | Africa Center of Excellence for Power Management (*Centre d’Excellence Régional pour la*  *Maîtrise de l’Electricité*) | | CERSA | Africa Center of Excellence for for Poultry Science (*Centre d’Excellence Africain sur les Sciences*  *Aviaires*) | | CMO | Center’s Management Office | | CMU | Country Management Unit | | CNRS | National Center for Scientific Research (*Centre National de la Recherche Scientifique*) | | CoE-EIE | College of Engineering: Energy, Transport Infrastructures and Environment (*Collège*  *d'Ingénierie en Énergie, Infrastructure, Environnement*) | | CRB  CU | Complaints Review Board  Covenant University | | DA | Designated Account | | DAAD | German Academic Exchange Service (*Deutscher Akademischer Austauschdienst*) | | DFG | German Research Foundation (*Deutsche Forschungsgemeinschaft*) | | DFIL | Disbursement and Financial Information Letter | | DLI | Disbursement-linked Indicator | | DLR | Disbursement-linked Result | | DOUNEDON | Africa Center of Excellence for Sustainable Cities in Africa (*Centre d’Excellence Régional Villes Durables en Afrique*) | | DP | Development Partner | | ECOWAS | Economic Community of West African States | | EEP | Eligible Expenditure Program | | EMIG | School of Mines, Industry and Geology, Niger (*Ecole des Mines, de l’Industrie et de la Géologie*) | | ENSEA | National School of Statistics and Applied Economics, Côte d’Ivoire (*École nationale supérieure*  *de Statistique et d'Économie appliquée*) | | ESIA | Environmental and Social Impact Assessment | | ESMF | Environmental and Social Management Framework | | ESMP | Environmental and Social Management Plan | | FA | Financing Agreement | | FM | Financial Management | | FMS | Financial Management Specialist | | FUTMIN | Federal University of Technology, Minna, Nigeria | | FUTO | Federal University of Technology, Owerri, Nigeria | | GDP | Gross Domestic Product | | GLF | Gambia Local Fund | | GP | Global Practice | | GTTI | Gambia Technical Training Institute, The Gambia | | IAAB | International Academic Advisory Board | | IBRD | International Bank for Reconstruction and Development | | icipe | International Center of Insect Physiology and Ecology | | ICS | Individual Consultant Selection | | ICT | Information and Communications Technology | | IDA | International Development Association | | IDRC | International Development Research Center, Canada | | IFR | Unaudited Interim Financial Report | | IFRS | International Financial Reporting Standards | | INP-HB | National Polytechnic Institute - Houphouët-Boigny, Côte d’Ivoire (*Institut National*  *Polytechnique Félix Houphouët-Boigny*) | | IPF | Investment Project Financing | | IPSAS | International Public Sector Accounting Standards | | IRD | French National Research Institute for Sustainable Development (*Institut de Recherche pour*  *le Développement*) | | IRR | Internal Rate of Return | | ISA | International Standards on Auditing | | IT | Information Technology | | ITPV | Independent Third-party Verifiers | | LSU | Lagos State University, Nigeria | | M&E | Monitoring and Evaluation | | MAB | Most Advantageous Bid | | MAP | Most Advantageous Proposal | | MIS | Management Information System | | MoF | Ministry of Finance | | MTR | Mid-term Review | | NOUN | National Open University of Nigeria | | NPV | Net Present Value | | NREN | National Research and Education Network | | NSC | National Steering Committee | | NSF | National Science Foundation, USA | | NUC | National Universities Commission, Nigeria | | OAU | Obafemi Awolowo University, Nigeria | | PAD  PASET | Project Appraisal Document  Partnership for skills in Applied Sciences, Engineering and Technology | | PCU | Project Coordination Unit | | PDO | Project Development Objective | | PFA | Performance and Funding Agreement | | PhD | Doctor of Philosophy | | PIU | Project Implementation Unit | | POM | Project Operations Manual | | PPSD | Project Procurement Strategy for Development | | PR | World Bank Procurement Regulations | | PSC | Project Steering Committee | | QCBS | Quality Cost Based Selection | | R&D | Research and Development | | RBF | Results-based Financing | | RfP | Request for Proposal | | RfQ | Request for Quotation | | RFU | Regional Facilitation Unit | | RSIF | Regional Scholarship and Innovation Fund | | RU | Redeemer's University, Nigeria | | S&T | Science and Technology | | SAB | Sectoral Advisory Board | | SDR | Special Drawing Right | | SoE | Statement of Expenditure | | SSA | Sub-Saharan Africa | | STEM | Science, Technology, Engineering and Mathematics | | SYSCOHADA | West African/OHADA Accounting System | | TA | Technical Assistance | | ToR | Terms of Reference | | TTL | Task Team Leader | | TVET | Technical and Vocational Education and Training | | UAC | University of Abomey Calavi, Benin | | UAM | Abdou Moumouni University, Niger (*Université Abdou Moumouni*) | | UEMOA/WAEMU | West African Economic and Monetary Union *(Union Economique et Monétaire Ouest Africaine)* | | UFHB | Félix Houphouët-Boigny University, Côte d’Ivoire (*Université Félix Houphouët-Boigny*) | | UKRI | United Kingdom Research and Innovation | | UL | University of Lomé, Togo (*Université de Lomé*) | | UNN | University of Nigeria-Nsukka, Nigeria | | UNESCO | United Nations Educational, Scientific and Cultural Organization | | UniBen | University of Benin, Nigeria | | UniLag | University of Lagos, Nigeria | | UniPort | University of Port Harcourt, Nigeria | | USD/US$ | United States Dollar | | WBG | World Bank Group | |  |  | |

**TABLE OF CONTENTS**

[DATASHEET 1](#_Toc23930659)

[I. STRATEGIC CONTEXT 10](#_Toc23930660)

[A. Regional Context 10](#_Toc23930661)

[B. Sectoral and Institutional Context 11](#_Toc23930662)

[C. Relevance to Higher Level Objectives 18](#_Toc23930663)

[II. PROJECT DESCRIPTION 20](#_Toc23930664)

[A. Project Development Objective 20](#_Toc23930665)

[B. Project Components 20](#_Toc23930666)

[C. Project Beneficiaries 31](#_Toc23930667)

[D. Results Chain 32](#_Toc23930668)

[E. Rationale for World Bank Involvement and Role of Partners 32](#_Toc23930669)

[F. Lessons Learned and Reflected in the Project Design 34](#_Toc23930670)

[III. IMPLEMENTATION ARRANGEMENTS 38](#_Toc23930671)

[A. Institutional and Implementation Arrangements 38](#_Toc23930672)

[B. Results Monitoring and Evaluation Arrangements 41](#_Toc23930673)

[C. Sustainability 43](#_Toc23930674)

[IV. PROJECT APPRAISAL SUMMARY 44](#_Toc23930675)

[A. Technical, Economic and Financial Analysis 44](#_Toc23930676)

[B. Fiduciary 47](#_Toc23930677)

[C. Safeguards 51](#_Toc23930678)

[V. KEY RISKS 54](#_Toc23930679)

[VI. RESULTS FRAMEWORK AND MONITORING 57](#_Toc23930680)

[ANNEX 1: Project Institutional and Implementation Arrangements 88](#_Toc23930681)

[ANNEX 2: Financial Management, Disbursements and Procurement 98](#_Toc23930682)

[ANNEX 3: Disbursement-Linked Indicators 130](#_Toc23930683)

[ANNEX 4: Strategy and Approach for Implementation Support 133](#_Toc23930684)

[ANNEX 5: Implementation Support Plan and Resource Requirements 136](#_Toc23930685)

[ANNEX 6: Thematic Areas for First and Second ACE Impact Projects 139](#_Toc23930686)

[ANNEX 7: Economic and Financial Analysis 144](#_Toc23930687)

[ANNEX 8: Partnership Arrangement with AFD 155](#_Toc23930688)

|  |
| --- |
| DATASHEET |

|  |
| --- |
| **BASIC INFORMATION** |

|  |  |  |
| --- | --- | --- |
| BASIC\_INFO\_TABLE | | |
| Country(ies) | Project Name | |
| Africa, Benin, Gambia, The, Niger, Nigeria, Togo | Second Africa Higher Education Centers of Excellence for Development Impact | |
| Project ID | Financing Instrument | Environmental Assessment Category |
| P169064 | Investment Project Financing | B-Partial Assessment |

|  |  |  |
| --- | --- | --- |
| **Financing & Implementation Modalities** | | |
| [ ] Multiphase Programmatic Approach (MPA) | | [ ] Contingent Emergency Response Component (CERC) |
| [ ] Series of Projects (SOP) | | [✓] Fragile State(s) |
| [✓] Disbursement-linked Indicators (DLIs) | | [ ] Small State(s) |
| [ ] Financial Intermediaries (FI) | | [ ] Fragile within a non-fragile Country |
| [ ] Project-Based Guarantee | | [ ] Conflict |
| [ ] Deferred Drawdown | | [ ] Responding to Natural or Man-made Disaster |
| [ ] Alternate Procurement Arrangements (APA) | | |
|  | | |
| Expected Approval Date | Expected Closing Date | |
| 26-Nov-2019 | 30-Jun-2024 | |
| Bank/IFC Collaboration | | |
| No | | |

|  |
| --- |
| **Proposed Development Objective(s)** |

|  |
| --- |
| To improve quality, quantity and development impact of postgraduate education in selected universities through regional specialization and collaboration. |

|  |
| --- |
| **Components** |

|  |  |  |
| --- | --- | --- |
| **Component Name** | **Cost (US$, millions)** |  |
| Establishing New and Scaling up Well-performing existing Africa Centers of Excellence for Development Impact | 260.00 |  |
| Fostering Regional Partnerships and Scholarships | 42.00 |  |
| Enhancing National and Regional Level Project Facilitation, and Monitoring and Evaluation | 12.50 |  |
| Unallocated | 15.70 |  |

|  |
| --- |
| **Organizations** |

|  |  |
| --- | --- |
| Borrower: | Republic of Benin: Ministry of Economic and Finance  Republic of Togo: Ministry of Economy and Finance  Republic of Niger : Ministry of Planning  Republic of The Gambia: Ministry of Finance and Economic Affairs  Federal Republic of Nigeria: Federal Ministry of Finance |
| Implementing Agency: | Association of African Universities (RFU)  The Gambia- Project Coordinating Unit (PCU-Gambia)  Nigeria - National Universities Commission (NUC) |

|  |
| --- |
| **PROJECT FINANCING DATA (US$, Millions)** |

|  |  |
| --- | --- |
| **SUMMARY-NewFin1** | |
| **Total Project Cost** | 330.20 |
| **Total Financing** | 330.20 |
| **of which IBRD/IDA** | 131.00 |
| **Financing Gap** | 0.00 |
|  | |

|  |  |
| --- | --- |
| **DETAILS-NewFinEnh1** | |
| **World Bank Group Financing** | |
| International Development Association (IDA) | 131.00 |
| IDA Credit | 94.00 |
| IDA Grant | 37.00 |
| **Non-World Bank Group Financing** | |
| Counterpart Funding | 148.00 |
| Borrower/Recipient | 148.00 |
| Other Sources | 51.20 |
| FRANCE: French Agency for Development | 51.20 |
|  | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **IDA Resources (in US$, Millions)** | | | | |
|  | **Credit Amount** | **Grant Amount** | **Guarantee Amount** | **Total Amount** |
| **Benin** | 2.00 | 4.00 | 0.00 | 6.00 |
| National PBA | 0.00 | 2.00 | 0.00 | 2.00 |
| Regional | 2.00 | 2.00 | 0.00 | 4.00 |
| **Gambia, The** | 0.00 | 12.00 | 0.00 | 12.00 |
| National PBA | 0.00 | 4.00 | 0.00 | 4.00 |
| Regional | 0.00 | 8.00 | 0.00 | 8.00 |
| **Niger** | 5.00 | 10.00 | 0.00 | 15.00 |
| National PBA | 0.00 | 5.00 | 0.00 | 5.00 |
| Regional | 5.00 | 5.00 | 0.00 | 10.00 |
| **Nigeria** | 75.00 | 0.00 | 0.00 | 75.00 |
| National PBA | 25.00 | 0.00 | 0.00 | 25.00 |
| Regional | 50.00 | 0.00 | 0.00 | 50.00 |
| **Togo** | 12.00 | 6.00 | 0.00 | 18.00 |
| National PBA | 6.00 | 0.00 | 0.00 | 6.00 |
| Regional | 6.00 | 6.00 | 0.00 | 12.00 |
| **Africa** | 0.00 | 5.00 | 0.00 | 5.00 |
| Regional | 0.00 | 5.00 | 0.00 | 5.00 |
| **Total** | **94.00** | **37.00** | **0.00** | **131.00** |
|  | |  | | |

|  |
| --- |
| **Expected Disbursements (in US$, Millions)** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **WB Fiscal Year** |  |  |  |  |  | 2020 | 2021 | 2022 | 2023 | 2024 |
| **Annual** |  |  |  |  |  | 10.00 | 20.00 | 38.00 | 40.00 | 23.00 |
| **Cumulative** |  |  |  |  |  | 10.00 | 30.00 | 68.00 | 108.00 | 131.00 |

|  |
| --- |
| **INSTITUTIONAL DATA** |

|  |  |
| --- | --- |
| **Practice Area (Lead)** | **Contributing Practice Areas** |
| Education | Digital Development, Energy & Extractives, Environment, Natural Resources & the Blue Economy, Health, Nutrition & Population |

|  |
| --- |
| **Climate Change and Disaster Screening** |
| This operation has been screened for short and long-term climate change and disaster risks |

|  |
| --- |
| **Gender Tag** |
| |  |  | | --- | --- | | **Does the project plan to undertake any of the following?** | | | a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF | Yes | | b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment | Yes | | c. Include Indicators in results framework to monitor outcomes from actions identified in (b) | Yes | |
|  |

|  |
| --- |
| **SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)** |

|  |  |
| --- | --- |
| **Risk Category** | **Rating** |
| |  |  | | --- | --- | | 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 | ⚫⚫⚫⚫⚫ Low |  |  |  | | --- | --- | | 8. Stakeholders | ⚫⚫⚫⚫⚫ Moderate |  |  |  | | --- | --- | | 9. Other | ⚫⚫⚫⚫⚫ Moderate |  |  |  | | --- | --- | | 10. Overall | ⚫⚫⚫⚫⚫ Moderate | | |

|  |
| --- |
| **COMPLIANCE** |

|  |
| --- |
| **Policy** |
| Does the project depart from the CPF in content or in other significant respects? |
| [ ] Yes [✓] No |
|  |
| Does the project require any waivers of Bank policies?  [ ] Yes [✓] No |
|  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | **Safeguard Policies Triggered by the Project** | **Yes** | **No** | | | |
| Environmental Assessment OP/BP 4.01 | ✔ |  |
| Performance Standards for Private Sector Activities OP/BP 4.03 |  | ✔ |
| Natural Habitats OP/BP 4.04 |  | ✔ |
| Forests OP/BP 4.36 |  | ✔ |
| Pest Management OP 4.09 |  | ✔ |
| Physical Cultural Resources OP/BP 4.11 | ✔ |  |
| Indigenous Peoples OP/BP 4.10 |  | ✔ |
| Involuntary Resettlement OP/BP 4.12 |  | ✔ |
| Safety of Dams OP/BP 4.37 |  | ✔ |
| Projects on International Waterways OP/BP 7.50 |  | ✔ |
| Projects in Disputed Areas OP/BP 7.60 |  | ✔ |

|  |
| --- |
| **Legal Covenants** |

|  |  |
| --- | --- |
| Sections and Description | |
| Schedule 2, Section I, E, 1 – Verification of DLIs (applicable to The Gambia)  Schedule 2, Section I, F, 1 – Verification of DLIs (applicable to Benin, The Gambia, Niger, Nigeria and Togo)  The Recipient shall, by no later than three (3) months after the Effective Date, appoint external monitoring and evaluation experts (“Independent Verifiers”), to act as third-party verifiers of the proper fulfillment of DLIs as set forth in Schedule 4 to this Agreement. | |
|  |  |

|  |  |
| --- | --- |
| Sections and Description | |
| Schedule 2, Section I, F, 1 – Project Implementation Plans (applicable to The Gambia)  Schedule 2, Section I, G, 1 – Project Implementation Plans (applicable to Benin, Niger, Nigeria and Togo)  The Recipient shall cause the ACEs to: (a) adopt not later than three (3) months after the Effective Date and, thereafter maintain their respective Project Implementation Plans in form and substance satisfactory to the Association; and (b) carry out the Project in accordance with the Project Implementation Plan and the Environmental and Social Management Plan. | |
|  |  |

|  |  |
| --- | --- |
| Sections and Description | |
| Schedule 2, Section IV.1 a & b – Specific Financial Management Covenant (applicable to Benin)  (a) The Recipient shall no later than three (3) months after the Effective Date :(i) recruit in three ACEs an accountant with qualifications, experience and terms of reference, satisfactory to the Association, each for ACE: Mathematical Sciences, Computer Science and Applications (CEA-SMIA), ACE: Water and Sanitation (C2EA), and College of engineering EIE (CoE-EIE); (ii) cause the University of Abomey-Calavi to extend CEA-SMIA’s audit committee arrangements to C2EA, and CoE-EIE; (iii) deploy CEA-SMIA’s current accounting software, in form and substance satisfactory to the Association; and (iv) recruit an internal auditor, with experience and qualifications satisfactory to the Association, with the responsibility for internal audits for CEA-SMIA, C2EA, and CoE-EIE; and  (b) no later than six (6) months after the Effective Date, recruit an external auditor in accordance with the provisions of the Procurement Regulations. | |
|  |  |

|  |  |
| --- | --- |
| Sections and Description | |
| Schedule 2, Section IV.1 1 & 2 – Specific Financial Management Covenant (applicable to The Gambia)  1. The Recipient shall no later than three (3) months after the Effective Date :(i) recruit within PCU Gambia a senior financial management specialist, and an internal audit consultant, all in accordance with the provisions of the Procurement Regulations; and (ii) customize the accounting software for Project’s bookkeeping, in form and substance satisfactory to the Association; and  2. no later than six (6) months after the Effective Date, recruit independent external auditors for the Project, in accordance with the provisions of the Procurement Regulations. | |
|  |  |

|  |  |
| --- | --- |
| Sections and Description | |
| Schedule 2, Section IV.1 a & b – Specific Financial Management Covenant (applicable to Niger)  (a) The Recipient shall no later than three (3) months after the Effective Date :(i) acquire a computerized accounting information system for the management of the Project with specifications satisfactory to the Association; (ii) recruit an internal auditor and two senior accountants with qualifications and terms of reference satisfactory to the Association, to support the two centers at the Université Abdou Moumouni University (UAM); and (iii) recruit a senior accountant with qualifications and terms of reference satisfactory to the Association to support the center at the Ecole des Mines, de l’Industrie et de la Géologie (EMIG) ; and  (b) no later than six (6) months after the Effective Date, recruit an external auditor in accordance with the Procurement Regulations. | |
|  |  |

|  |  |
| --- | --- |
| Sections and Description | |
| Schedule 2, Section IV.1 1 & 2 – Specific Financial Management Covenant (applicable to Nigeria)  1. The Recipient shall no later than three (3) months after the Effective Date :  (a) cause the National Universities Commission (NUC) to: (i) update the Financial Management Manual, in form and substance satisfactory to the Association; and (ii) recruit, or if already available in NUC second a financial management consultant in accordance with the provisions of the Procurement Regulations; and  (b) cause the relevant Higher Education Institutions to: (i) complete the computerization and upgrades of respective accounting system, in form and substance satisfactory to the Association; (ii) establish an audit committee with functions, resources and terms of reference, satisfactory to the Association , to ensure appropriate follow-up and action on audit recommendations, in a manner satisfactory to the Association; (iii) submit the audit report conducted for Fiscal Year 2016 – 2018, in form and substance satisfactory to the Association; and (iv) recruit or, if already available in the pertinent Higher Education Institution, second an accountant and internal audit staff, all with qualifications, experience and terms of reference, satisfactory to the Association; and  2. no later than six (6) months after the Effective Date, cause NUC and the relevant Higher Education Institutions to adopt internal reforms, satisfactory to the Association, to ensure timely submission of the Project Interim Financial Reports and internal audit reports. | |
|  |  |

|  |  |
| --- | --- |
| Sections and Description | |
| Schedule 2, Section IV.1 a & b – Specific Financial Management Covenant (applicable to Togo)  (a) The Recipient shall no later than three (3) months after the Effective Date :(i) recruit in the two new Togolese ACEs a financial management specialist, with experience, qualifications and terms of reference, satisfactory to the Association, each for ACE: Power Management (CERME), and ACE: Sustainable Cities in Africa (ACE-DOUNEDON); (ii) re-assign two accountants, with experience, qualifications and terms of reference, satisfactory to the Association, each for CERME and ACE-DOUNEDON; (iii) extend the internal audit as well as audit committee arrangements of the ACE: Poultry Science’s (CERSA) to ACE: Power Management (CERME), and ACE: Sustainable Cities in Africa (ACE-DOUNEDON); and (iv) upgrade CERSA accounting software with a software acceptable to the Association, and deploy said software at CERME and ACE-DOUNEDON for the management of the Project accounts; and  (b) no later than six (6) months after the Effective Date, recruit an external auditor in accordance with the provisions of the Procurement Regulations. | |
|  |  |

|  |  |
| --- | --- |
| Sections and Description | |
| Schedule 2, Section I.3 a & b – Specific Implementation Covenants (applicable to the Regional Facilitation Unit - RFU)    The Recipient shall at all times during the implementation of the Project:  (a) maintain within RFU, the Project manager recruited in accordance with the provisions of the Procurement Regulations. Said Project manager will, inter alia, lead the RFU reporting to the Recipient’s Secretary General under terms of reference, satisfactory to the Association  (b) ensure that the RFU participates in annual performance assessments in accordance with agreed performance metrics, in form and substance satisfactory to the Association | |
|  |  |

|  |
| --- |
| **Conditions** |

|  |  |
| --- | --- |
| Type | Description |
| Effectiveness | The Performance and Funding Agreements have been executed in form and substance satisfactory to the Association on behalf of the Recipient and the Higher Education Institutions. ARTICLE V, 5.01. (a) |

|  |  |
| --- | --- |
| Type | Description |
| Effectiveness | The Project Regional Operations Manual has been endorsed by the Recipient in form and substance satisfactory to the Association. ARTICLE V, 5.01. (b) |

|  |  |
| --- | --- |
| Type | Description |
| Effectiveness | Performance and Funding Agreements have been duly authorized or ratified by the Recipient and the Higher Education Institutions and are legally binding upon the Recipient and the Higher Education Institutions in accordance with their terms. ARTICLE V, 5.02 (applicable to Benin, The Gambia, Niger, Nigeria and Togo) |

|  |  |
| --- | --- |
| Type | Description |
| Effectiveness | The Co-financing Deadline for the effectiveness of the Co-financing Agreement is eighteen (18) months from the Effective Date. ARTICLE IV, 4.02 (applicable to Benin and Nigeria) |

|  |  |
| --- | --- |
| Type | Description |
| Disbursement | No withdrawal shall be made until and unless the Association has received from RFU or the Independent Verifiers, the EEP Spending Reports confirming that the DLI and DLR have been achieved and containing a proposal for disbursement under each Withdrawal. Schedule 2, Section III, B, 1 (b) (applicable to Benin, The Gambia, Niger, Nigeria and Togo) |

|  |  |
| --- | --- |
| Type | Description |
| Disbursement | For RSIF grants and scholarships under Category (2) unless: (i) the Subsidiary Agreement has been executed in form and substance satisfactory to the Association on behalf of the Recipient and ICIPE; and (ii) the Recipient has submitted a legal opinion, satisfactory to the Association, confirming that said Subsidiary Agreement has been duly authorized or ratified by the Recipient and ICIPE and is legally binding upon the Recipient and ICIPE in accordance with their terms. Schedule 2, Section III, B, 1 (c) - (applicable to Benin and Nigeria) |

|  |
| --- |
| 1. STRATEGIC CONTEXT |

|  |
| --- |
| A. Regional Context |

1. **Sub-Saharan Africa (SSA)[[1]](#footnote-2) is home to the largest share of the global poor and demonstrates the widest poverty gap.** Of the 767 million people, globally, living below the extreme poverty line in 2013, 389 million (51 percent) were in SSA. Although the overall global number of the extremely poor is decreasing (dropping to 736 million in 2015) and is expected to continue to decrease, nearly 9 in 10 of the global extremely poor are expected to reside in SSA by 2030, should economic growth over the next 12 years follow historical growth patterns. Three of the predominant attributes of the profile of the poor are that they are poorly educated, young, and employed in the agricultural sector. The common drivers of inequality which need to be addressed to reduce the poverty gap are: slow human capital accumulation; disparities in access to jobs and income-generating opportunities; and unsuccessful government interventions that attempt to address market-based inequalities[[2]](#footnote-3) (such as taxes and transfers).
2. **Between 2003 and 2013, SSA experienced remarkable economic growth with an average annual real gross domestic product (GDP) growth rate of 5.3 percent, largely driven by a commodity price boom. This growth, however, did not translate into significant poverty reduction,** partlydue to high population growth, limited creation of jobs and an unequal distribution of the benefits of such economic growth. The pace of economic growth in SSA has increased recently – rising from 1.5 percent in 2016 to 2.6 percent in 2017, although this remains the lowest level of economic growth observed in the region in more than two decades. While SSA has tremendous potential for growth, recent trends and a modest outlook moving forward reflect, in part, insufficient progress on structural reforms.
3. **To achieve strong economic growth and reduce poverty, increased productivity across key economic priority sectors, economic diversification, and implementation of structural reforms are needed**. Human capital development is essential for increasing productivity and promoting economic diversification. SSA economies are highly dependent on unskilled labor and natural resources, preventing the region from moving up the value chain and becoming more specialized in knowledge-intensive, and high value-added activities. An additional challenge relates to low institutional capacity in the region to train a sufficient number of professionals with the technical and critical thinking skills (such as high-order cognitive skills) required to incorporate new knowledge and technologies into products and services.
4. **A range of priority economic sectors face shortages in workers with high-level (postgraduate level) skills, as well as limitations in applied research which is needed to increase productivity.** The skills and applied research shortages in priority sectors include: in the energy sector (power generation, transmission, and renewable energy); within extractives (mining, oil, and gas); sustainable urban planning, transport, sustainable agriculture, health and environment (coastal resilience, climate change, and assessments related to infrastructure and mining); in education (teacher training in science, technology, engineering and math (STEM) education); and in the information and communications technology (ICT) sector - both in the ICT sector and cross-cutting areas (advanced digital skills). Other important areas where high-level skills are needed are those fields focusing on more policy-relevant research on Africa’s development challenges that can inform policymakers and public debate, for example, the fields of statistics and quantitative economics. The region also faces technical skills shortages in procurement, financial management (FM), and safeguards (environmental and social), affecting the design and implementation of development projects financed by governments and development partners (DPs). This results in an overreliance on expatriates and international consultants.
5. **Human resource capacity in SSA remains particularly low in the science and technology (S&T) fields.** A survey of executives shows that for the indicator “Availability of scientists and engineers”, Nigeria and Mauritania rank 79th and 137th, respectively, out of 137 countries globally.[[3]](#footnote-4) In 2010, the share of researchers in Senegal and Ghana engaged in engineering and technology-related research was 2 and 13 percent, respectively, compared to 62 percent (2013) in Singapore. In 2014, the number of researchers per one million inhabitants in South Korea was 6,899 compared to only 88 in SSA. While it is home to 14 percent of the world’s population, SSA’s share of global expenditure on research and development (R&D) was only 0.8 percent in 2014, and this figure remained unchanged for the prior five years.[[4]](#footnote-5)
6. **Improved productivity can be achieved by equipping the workforce with relevant S&T skills and ensuring competencies necessary to develop, adapt and apply solutions to sectoral challenges in Africa** (e.g., in supporting industries in producing higher value-added products and services). If African higher education institutions are transformed to deliver international-quality training and applied research, becoming more dynamic and internationally connected, such training and research could be increasingly undertaken in Africa. Thus, African talent would be more likely to stay in the region and in turn increase institutional capacity in the region to adopt more technology, deliver innovative services and support evidence-based policy making.

|  |
| --- |
| **B. Sectoral and Institutional Context** |

1. **The education systems in SSA face important challenges at all levels.** While significant gains have been observed in increasing access to primary education, major efforts are still needed to ensure that all children have access to quality basic education – as this provides the foundation for an individual’s success in post-basic education. Continued and additional efforts are needed to increase access to and improve the quality and relevance of secondary, technical and vocational education and training (TVET) and higher education, to combat youth unemployment and underemployment and build overall capacity in the region.
2. **Key challenges facing the higher education sector in the region include the following:**
3. **Low quality of higher education programs.** Global higher education rankings provide some indication of the quality of universities and the programs they offer. The most widely used rankings show that, in SSA, only a few South African universities feature in the top 500.[[5]](#footnote-6) International accreditation assessments of education programs in engineering undertaken in the context of the World Bank-financed Africa Higher Education Centers of Excellence Project (ACE I) (P126974) highlight the following as key drivers of poor quality programs: (a) the educational objectives of programs and student learning outcomes are not clearly stated nor are they assessed; (b) there are no periodic reviews of the competencies of graduates that are in demand by employers; (c) programs provide few hands-on practical projects/opportunities, placing an emphasis on theoretical knowledge; (d) student admissions processes do not adequately capture the preparedness of students for technical fields such as engineering; (e) weak processes for selecting and determining the basic coursework for various fields of study; and (f) no mechanisms to ensure that teaching and assessment procedures are followed. These shortcomings are found to be more important than*, inter alia,* limited qualifications of the faculty and limitations in the teaching and learning environment (e.g. limited internet connectivity, and insufficient and inadequate equipment and laboratories for teaching and research).
4. **Limited impact of postgraduate education (including linkages with labor-market needs of the priority sectors) and applied research on economic development.** Key sector stakeholders, such as companies and line ministries who stand to benefit significantly from the availability of skilled graduates and relevant research outputs, are usually not active participants in the education or research programs and activities of most SSA universities. Their absence contributes to a mismatch in the demand for and supply of skills, and a misalignment of applied research with priority sector needs. As a result, graduates and research outputs of these academic programs have only a limited impact in terms of addressing challenges that the priority sectors face. There is inadequate engagement on the part of industry stakeholders in, for example, curricula development, advisory boards at universities, the identification of research topics and the provision of internships to students.
5. **Limited supply (quantity) of higher education graduates, particularly from master’s and Doctor of Philosophy (PhD) programs in priority sectors.** The region has experienced a massive expansion in student enrollment in higher education, with many public universities in Africa experiencing increases in enrollment far beyond what they were designed to accommodate. In the region, higher education enrollment increased from 2.5 million in 2000 to 7.4 million in 2015. Despite this significant expansion in enrollment, gross higher education enrollment rate remains low at 9 percent (compared to 74 percent in industrialized countries). There is a noticeable gender gap with 10.5 percent of men in the relevant age-cohort enrolled compared to only 7.5 percent for women. Further, only six percent of total enrollment is in master’s degree programs and one percent in PhD programs. In West Africa, the share of higher education students enrolled in STEM programs, which are critical fields for economic growth and development, is as low as 9 percent[[6]](#footnote-7) in some countries, according to available data. The share of female enrollment in STEM fields with respect to the overall enrollment of higher education students in STEM programs is also extremely low – accounting for just 5 percent in Niger and 8 percent in Ghana. Such low higher education enrollment rates, coupled with a shortage of skilled labor, points to the significant need for a strategic expansion of the higher education sector.
6. **Other major challenges limiting the quality and relevance of higher education include:**
7. **Limited cross-country collaboration in higher education:** Regional higher education cross-country collaboration – which has been limited to date – is advantageous as no one country can afford to fund quality higher education in all the areas required for the development of their economies and challenges they face. As such, it is inefficient and a missed opportunity if knowledge and skills acquisition are not generated as public goods to solve common regional problems. Further, the limited demand for higher education at a national level results in little competition among higher education institutions, and hence there is lower value-for-money (whether public or private). To date, there has only been limited regional coordination in higher education, leading to unnecessary duplication of efforts and inefficient public investments. Governments and most institutions are yet to develop a regional vision, strategy and capacity to support the development of a competitive regional market for higher education. A practical issue stemming from the lack of regional integration is the cumbersome nature of mutual and international recognition of accreditation.
8. **Ineffective governance and inefficient management of higher education institutions:** Weak institutional governance is often manifested in internal conflicts between faculties and departments, faculty and student strikes, and non-merit-based appointments. Weak governance stems from: a lack of pro-active, transparent, and professional leadership; political interference; and decisions motivated by other non-academic (including personal and political) objectives. The lack of a consistently maintained academic calendar with timely admissions and exams – combined with limited management information systems (MIS), weak FM and procurement at the institutional level – often leads to low quality programs and, hence, graduates with low competency levels. Specifically, the lack of reliable and timely data results in poor planning, lack of accountability of institutional leadership, an inefficient use of resources, and difficulties in assessing institutional performance.
9. **Inadequate financing for higher education:** The provision of quality higher education cannot be sustained without additional contributions from affluent households and the private sector. Public funding for higher education is scarce across the region – and, by itself, is insufficient to finance the expansion of and improvements in higher education. With the exception of countries such as Senegal, Sierra Leone, Ghana, Côte d’Ivoire, and Gabon, government investments in higher education are less than 1 percent of GDP in most countries in West and Central Africa (see Table 1). Most students enrolled in higher education in SSA come from relatively affluent households that can contribute more towards covering the costs of higher education, particularly at the postgraduate level. Currently, public funding in SSA targeting low-income students is insufficient. Further, public funding is not channeled to strategic areas of higher education where private investments are not forthcoming (such as STEM). Moreover, institutions do not give adequate attention to supplementing public funding through non-budgetary services (e.g., student fees, consultancies, private donations, and international R&D competitions).

**Table 1. *Public Expenditure on Higher Education by Country***

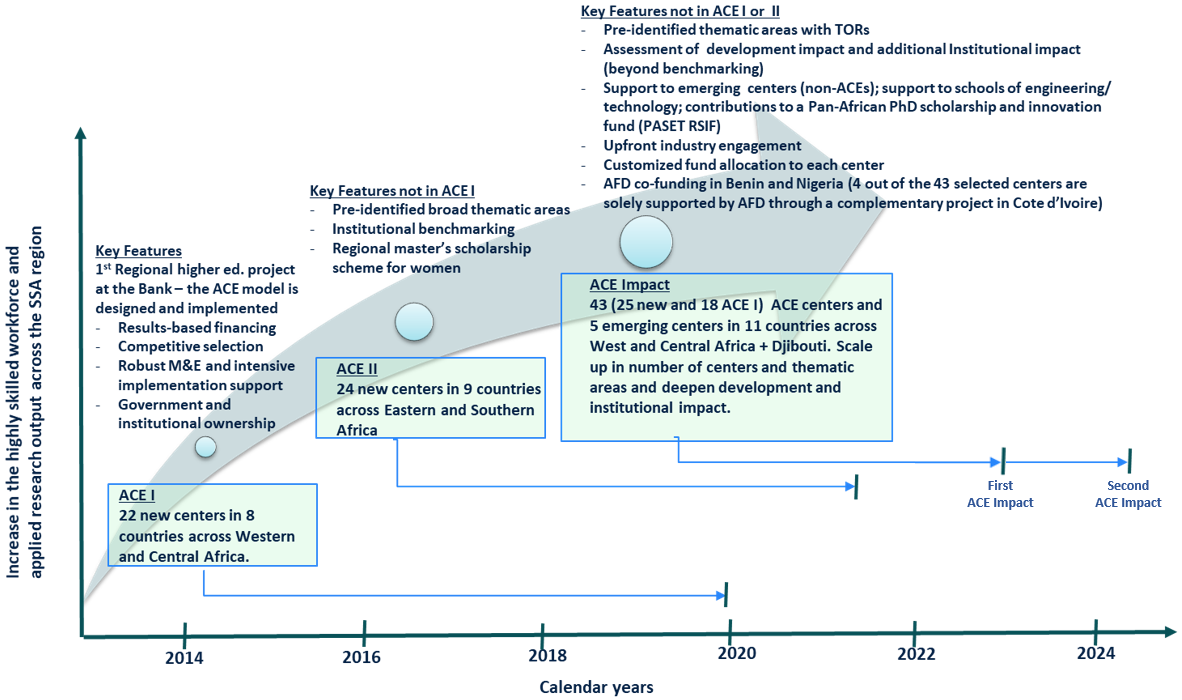
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Country** | **Benin** (2015) | **The Gambia** (2015) | **Niger**  (2016) | **Nigeria**  (2017) | **Togo**  (2017) |
| Public expenditure on higher education in US$ (millions) | 78.50 | 3.30 | 76.87 | 1,580 | 42.56 |
| Higher education expenditure as share of public expenditure on education (%) | 21.60 | 12.49 | 19.00 | - | 18.40 |
| Higher education expenditure as percentage of GDP (%) | 0.96 | 0.48 | 0.87 | 0.42 | 0.88 |

*Sources: The Gambia Education Sector Analysis 2017; Benin Education Sector Analysis 2018; Togo Education Sector Analysis 2019; Niger Education Sector Analysis 2019; UNESCO UIS* [http://data.uis.unesco.org/Index.aspx?DataSetCode=edulit\_ds#](http://data.uis.unesco.org/Index.aspx?DataSetCode=edulit_ds) *retrieved on August 2019; Nigeria 2017 Federal Government Education Budget .*

1. **As a result of these challenges facing the higher education sector in SSA, programs offered at the postgraduate level are generally not responsive to the region’s needs for skills, training and knowledge.** Limited provision of high quality and market-relevant academic programs and the small number of graduates with skills critical for the priority sectors consequently lead to many students from the region seeking postgraduate degrees to make the decision to obtain them outside of SSA. Available data indicate that in 2016, of the almost 200,000 higher education students from West and Central Africa studying outside their countries, fewer than 20 percent were studying in SSA. For example, out of the 23,000 Cameroonians pursuing their studies abroad, only 8 percent are doing so in SSA. Similarly, in 2016, 50,000 of Nigeria’s 65,000 outbound students were pursuing their studies outside of SSA[[7]](#footnote-8).
2. **While the tuition and living costs of these outbound students is expensive for the region, the loss of talent has even more significant implications.** It costs the region an estimated US$3.6 billion per year to cover the costs of these students pursuing their studies abroad. When these students do not return to the region but choose to work abroad upon graduation, the region suffers a further talent deficit. Without a timely expansion of quality postgraduate programs, the future quality and relevance of higher education in the region will be undermined. The student population in higher education institutions in West and Central Africa is expected to double every ten years over the next 30 years which will increase the pressure on these institutions to accommodate them and could negatively impact quality and relevance.
3. **Addressing the challenges in the higher education sector will require interventions at the national and regional levels.** A number ofefforts have been undertaken or are currently underway. At the national level, the World Bank is supporting national higher education programs in several SSA countries. For example, in West Africa, there are currently International Development Association (IDA)-funded higher education projects in Mali (P151318), Burkina Faso (P164293) and Côte d’Ivoire (P160642). These projects aim to address key challenges related to employability, access and equity, and the quality of higher education - with a focus on the undergraduate level and government capacity for accreditation and financing. At the regional level, the World Bank launched its first regional higher education intervention in SSA through a series of ACE Projects.

The ACE I Project which was launched in 2014 in West and Central Africa, with an additional financing (AF) (P153111) in 2016 for Côte d’Ivoire, supports 22 centers in total. This was followed by the ACE II project (second phase - P151847), which was launched in 2016 in East and Southern Africa and supports 24 centers.

1. **The Africa Higher Education Centers of Excellence for Development Impact (ACE Impact) projects target West and Central African countries (including Djibouti) and consist of two projects.** The ACE Impact Projects include: (i) the First ACE Impact Project (P164546), focused on five countries (approved on March 27, 2019, and will close on December 31, 2023); and (ii) this proposed Second ACE Impact project, which will be across five countries. Both projects will have the same technical design, including common evaluation and selection schedule and processes, project operations manual (POM)[[8]](#footnote-9), as well as implementation arrangement structures. The regional facilitation unit (RFU), which is hosted at the Association of African Universities (AAU), will be responsible for regional coordination and monitoring and evaluation (M&E) activities for both projects (AAU is financed under both ACE Impact projects through regional grants). The projects will also share the same regional Project Steering Committee (PSC).
2. **The primary differences between the First ACE Impact and the proposed Second ACE Impact Projects are the list of participating countries and the preparation schedule.** The First ACE Impact Project is supporting 16 ACE centers (referred to as ACEs) and two Emerging Centers of Excellence (Emerging centers) across Burkina Faso, Djibouti, Ghana, Guinea and Senegal. Emerging centers are centers (non-ACE centers) that are selected through a non-competitive process to receive support to strengthen their programs mostly at the undergraduate and master’s degree level in a priority field. The First ACE Impact Project countries were selected based on the following criteria: (i) country readiness; (ii) expressed interest – countries that expressed interest in participating in the project first were prioritized; and (iii) planned elections – those countries with planned elections in February – March 2019 were also prioritized. The proposed Second ACE Impact Project will support 23 ACE centers and three Emerging centers across Benin, Niger, Nigeria, The Gambia and Togo. In addition, the French Development Agency (*Agence Française de Développement*, AFD) will finance four ACEs from Côte d’Ivoire and a project implementation unit from within the Ministry of Higher Education of Côte d’Ivoire for national level coordination. Figure 1 illustrates the key differences between ACE I, ACE II and the First and proposed Second ACE Impact Projects.

**Figure 1. Timelines for ACE I, ACE II and ACE Impact (First and Second) projects and key features**

*Note: The arrows show the duration between start and expected end dates of project implementation.*

1. **The ACE projects aim to build regional capacity to deliver high quality postgraduate courses and to conduct and disseminate international caliber applied research focused on addressing development challenges in SSA.** Given the limited resources available to support postgraduate training and applied research in SSA, the ACE projects are designed to increase specialization and excellence of higher education. This will build regional capacity essential to Africa’s development. The ACE projects leverage institutional and national strengths to serve regional needs. The ACE projects use a regional model with the following elements: transparent and competitive selection of centers; a strong focus on regional collaboration, networks and student recruitment; strong government and institutional ownership; results-based financing (RBF) with independent verification of results; a robust M&E protocol; intensive implementation support using regional and international subject matter experts; and the development of partnerships across institutions, private sector/industry actors and academics. The results from ACE I and II Projects are encouraging (see Boxes 1 and 2 below).
2. **Each ACE center contributes to the broader regional project goal of strengthening and regionalizing higher education in SSA.** AnACE center consists of a group of faculty members from multiple academic departments led by a recognized center leader and with a network of external sectoral and academic partners. The education and applied research activities of the center focus on a single thematic area that is critical for development, for instance, climate change, maternal and infant health, and/or Information technology (IT). ACE centers aim to recruit a high-quality regional student body and work towards: producing a highly trained workforce with skills tailored to the needs of the sector(s) they serve; partnering with industry and sector stakeholders to identify regional needs; and disseminating research results both in international publications and through appropriate regional channels.

**Box 2. ACE II Results**

Under the ACE II project, preliminary results from the Centers demonstrate good progress: (i) more than 1,142 master’s students and 253 PhD students have enrolled in the ACEs of which over 499 are female; (ii) US$7.2 million has been generated in external revenue within the two years of implementation; and (iii) 299 Memoranda of Understanding (MoUs) on research and training collaboration have been entered into by the ACEs with regional and international universities and research institutions. The Center for Innovative Drug Development and Therapeutic Trials for Africa at Addis Ababa University, Ethiopia, for example, obtained two grants with its partners, King’s College London (US$1.5 million), and University of Sussex (US$1 million) funded by the National Institute of Health (UK) for their research and to support PhD students and post-doctoral fellows.

**Box I. ACE I Results**

Centers supported under the ACE I Project have achieved strong results over four years of implementation: (i) 35 programs have attained international accreditation (> 200 percent of the target of 15 programs) and several top-performing ACEs have emerged; (ii) 16,000 short-term, 9,000 master’s and 2,000 students have enrolled in postgraduate programs, including 9,364 regional students (105 percent of the target of 8,900 regional students – a regional student is an African student from a country outside of the country of study); (iii) 4,962 students and faculty have participated in an internship in a company relevant to their field of study (72 percent of the target of 5,900 internships); and (iv) US$50.6 million has been generated by the 22 ACE I centers through competitive Research and Development (R&D) grants, scholarship competitions as well as student fees and testing services (633 percent of the target of US$8.0 million).

Progress made on the part of ACEs confirms that targeted applied research contributes substantially to development outcomes. For instance, the ACE Center for Genomics of Infectious Diseases in Nigeria tested in 2014 the first Ebola patient in the country within six hours of receiving the blood sample. This proved to be critical and timely for the successful containment of Ebola in the country.

1. **The proposed Second ACE Impact Project builds on lessons learned from the ACE I and II projects and emphasizes the largest remaining challenge, which is increasing the impact of these efforts on development.** The lessons learned are detailed in Section II.F. With the success of the established model, the proposed project will scale up the development impact from the production of quality, employable graduates and applied research in well-performing existing centers, and support New centers, including in Western and Central African countries that did not participate in either ACE I or the First ACE Impact Projects. Further, the project represents an evolution by aiming for a larger impact on development through: (a) specific targeting of pre-identified skills and knowledge gaps for the region (power engineering, ICT, environmental sciences, etc.); (b) ensuring mandatory upfront and continuous engagement with the key economic sector/industry players; (c) increasing focus on institutional change at the university level, beyond one center of the university, including strengthening engineering and technology schools; (d) allowing less competitive (Emerging) institutions to benefit from regional networking with the more competitive ACE centers; (e) directly linking with a series of World Bank and government supported regional initiatives; and (f) building a multi-partner platform for enhancing Africa’s higher education sector.
2. **By adding those centers to be supported in the First and proposed Second ACE Impact projects to those centers already supported under the ACE I and II Projects, the World Bank will be supporting a total of about 70 unique centers of excellence across SSA (where 14 of the New ACEs will be supported under this proposed Second ACE Impact Project).** This support will serve as a catalyst for building a highly skilled workforce and generating the applied research skills and knowledge required to drive SSA’s economic transformation. In developed and emerging economies, universities continue to be pivotal in driving change. For example, the Government of India supported 135 engineering colleges to improve the quality of their programs/training offered under the World Bank-financed Technical Engineering Educational Quality Improvement Program (P102549). Further, it is common to find many specialized centers in a single world-class university. For example, the KTH Royal Institute of Technology, a top-ranked Swedish university, currently has more than 50 such centers.
3. **The proposed Second ACE Impact Project is aligned with the Partnership for Skills in Applied Sciences, Engineering and Technology (PASET), which seeks to build – from the technical/vocational level to higher education and research – a technical and scientifically skilled labor force to support priority sectors in SSA.** Two of the main initiatives under PASET are the Regional Scholarship and Innovation Fund (RSIF) and the Regional Benchmarking of SSA universities. The ACE I and II Projects have provided the framework within which PASET’s RSIF has been nurtured and is now supported as a World Bank-financed project - Africa RSIF for Applied Sciences, Engineering and Technology (P165581) (the RSIF project). Participating countries may allocate part of their Second ACE Impact IDA financing envelope to the RSIF.
4. **Most higher education systems in the region lack accountability in the performance of their higher education institutions.** However, under PASET’s Benchmarking initiative, a strong momentum has been generated from several governments and universities in the region to strengthen availability of data which can be used for performance assessment. About 31 universities (most of which host ACE centers) across 12 countries participated in the PASET Benchmarking exercise in 2016. The benchmarking exercise compared universities on 60 indicators including those related to access, gender, quality of faculty, governance, financing, research, graduate outcomes and technology transfer. Benchmarking exercises coupled with student engagement surveys and graduate tracer studies currently under development could help to establish greater accountability and improve performance in higher education institutions in the region.

|  |
| --- |
| **C. Relevance to Higher Level Objectives** |

1. **The proposed Second ACE Impact Project will contribute to the World Bank Group’s (WBG) twin goals and relevant World Bank strategies.** The proposed project aims at reducing higher-level skills gaps, enhancing learning, and improving applied research and technology uptake in the priority sectors (the thematic areas of the centers for both ACE Impact Projects are presented in Annex 6). Therefore, it will contribute to increase productivity, spur economic growth, provide better opportunities of social mobility of children from low and middle-income families through higher education, and thereby reduce poverty. As such, the project aligns with the WBG twin goals of ending extreme poverty and boosting shared prosperity, in a sustainable manner, as well as the World Bank’s 2020 Education strategy “Learning for All”.
2. **The project is part of the World Bank’s Africa Regional Integration and Cooperation Strategy (FY18 – FY23), the Digital Economy for Africa Initiative on Digital Skills and the Africa Human Capital Plan.[[9]](#footnote-10)** At the core of the Africa Regional Integration and Cooperation strategy is the goal of ensuring that the regional workforce is equipped with the skills and applied technical knowledge to tackle various development challenges while harnessing the advantages of a regional approach. The objectives of the strategy, which include competitiveness and productivity and human capital as well as access to services are well aligned with the proposed Second ACE Impact Project. Further, the proposed project will help establish a competitive regional market for higher education in which ACE centers will be strengthened to provide quality postgraduate education in specific fields within specific priority sectors. ACE centers and their host institutions will receive support to develop their own regional strategic plans to help them attract the right profile of students and faculty from the region (and beyond) and establish the necessary student affairs services to cater to both nationals and non-nationals of the ACE host countries. The proposed project will also increase the production of advanced digital skills, an objective of the Africa region’s digital economy strategy. There are several STEM-focused centers and schools of engineering, that offer academic programs in advanced digital skills and related fields that will be receiving support under the proposed project. The proposed project addresses various development challenges, across several sectors that are known to impact human capital. The project is aligned with the Country Partnership Strategies (CPS) for the countries involved.
3. **The project is also aligned with the strategies of regional economic communities including the Economic Community of West African States (ECOWAS)** as well as national development strategies across countries in the region. The project was endorsed by the ECOWAS Ministers of Higher Education in September 2017 with the objective of sharing human and other university resources through these regional centers of excellence. In addition, countries in West and Central Africa have increasingly highlighted the importance of higher education in their economic growth and development.
4. **The proposed Second ACE Impact Project has benefited from extensive consultations on project design and scope.** Throughout project preparation, governments in West and Central Africa have contributed to the identification of priority skills and research gaps that should be addressed through the project and to the refinement of the project design. Through discussions with leading science research funding agencies in Europe, Asia and North America, the expectations for centers (also known as ACE Impact centers), to be supported through the proposed Second ACE Impact Project – towards sustainability, good governance and global partnerships – have been developed, and internationally recognized academic expertise in SSA has been identified.
5. **The proposed project also responds to priorities (in terms of training, capacity-building and research) identified for national and regional support in collaboration with participating governments, sectoral leaders in the region and the World Bank’s Global Practices (GPs).** This responsiveness to targeting well-defined needs can contribute to long-term sustainability of the centers. In addition to the broader priority areas of engineering, agriculture and health, the proposed project will provide financing to establish regional higher education centers of excellence within the following pre-identified areas: environmental science and applied impact assessment (Environment and Natural Resources GP); housing/land development and urban planning, (both coordinated with the Social, Urban, Rural and Resilience GP); digital development - ICT (coordinated with the Digital Development GP); power (transmission and generation) and renewable energy (solar) (coordinated with the Energy and Extractives GP); water (coordinated with the Water GP); nursing and professional health workers (coordinated with the Health, Nutrition and Population GP); education, training and leadership (internally coordinated within the Education GP); and quantitative economics (coordinated with the Office of the Chief Economist of the World Bank).
6. **These cross-GP collaborations are in addition to existing efforts supported under the ACE I and II projects–that support existing ACE centers that are jointly supervised by the Education GP and partner GPs, such as the Poverty and Equity GP for training in statistics.** The proposed project will capitalize on the World Bank’s and the governments’ sector knowledge and networks to meet the need for sectoral training and applied knowledge in partnership with the private sector and civil society. These synergies – strengthened through targeted partnerships – will further contribute to a single, coherent large-scale, sustainable ACE platform that benefits from substantial technical and financial support delivered through sector partners, international universities, and DPs.

|  |  |
| --- | --- |
| 1. **PROJECT DESCRIPTION** | |
| **A. Project Development Objective** |

**PDO Statement**

|  |
| --- |
| 1. The project development objective (PDO) is to improve the quality, quantity and development impact of postgraduate[[10]](#footnote-11) education in selected universities through regional specialization and collaboration. |

**PDO-Level Indicators**

1. The PDO-level indicators are:
   * + - Students (national and regional) enrolled in specialized master’s, PhD and short-term professional courses/programs in the ACEs (number) (*Quantity of Education & Regional Specialization*)
       - ACE programs and ACE host institutions that obtain international accreditation (number) (*Quality of Education*)
       - ACE host institutions with a comprehensive strategic plan for regionalization (%) (*Regional Specialization and Collaboration*)
       - ACEs that have had substantial development impact (as measured by an independent evaluation of each center’s impact on development) (number) (*Development Impact of Education*)
       - Students and faculty participating in internships in relevant institutions (number) (*Development Impact of Education*)

|  |
| --- |
| **B. Project Components** |

|  |
| --- |
|  |

1. **The proposed project consists of three Components:** Component 1 will aim to strengthen capacity in 23 ACE centers and their host institutions (supply-side). Component 2 will aim to strengthen three non-ACE institutions in the region and allow students to benefit from the capacity in the ACE centers (demand-side) as well contribute towards the RSIF. Centers under Component 2 will be referred to as *Emerging centers*. Component 3 will aim to support national[[11]](#footnote-12) - and regional-level facilitation of the project and M&E related activities. Financing for Component 1 and Sub-component 2.1 will be results-based, while financing for Component 3 will be input-based.

**Table 2. *Overview of Proposed Second ACE Impact Project Components and Sub-Components***

|  |  |  |
| --- | --- | --- |
| **Component 1** | **Component 2** | **Component 3** |
| **Establishing New and scaling-up well-performing existing ACEs for development impact** | **Fostering regional partnerships and scholarships** | **Enhancing national and regional level project facilitation, and M&E** |
| **Sub-component 1.1**  Support to establish New centers of excellence  **Sub-component 1.2**  Support to scale-up well performing ACE I centers | **Sub-component 2.1**  Support to Emerging centers (non-ACEs) for networking, regional technical assistance and improving learning environment  **Sub-component 2.2**  Support for PhD scholarships through the PASET RSIF | **Sub-component 3.1**  Support for project facilitation and M&E at the regional level  **Sub-component 3.2**  Support for national level coordination (Nigeria and The Gambia) by government-designated national higher education agencies |

1. **In both Nigeria and Benin, AFD participated in the project technical discussions with the centers and government representatives, organized by the World Bank.** Funds from AFD for Nigeria (EUR 35.6 million; US$40 million equivalent) and Benin (EUR 10 million; US$11.2 million equivalent) are expected to be approved by the AFD Board of Directors in December 2019 and January 2020, respectively. In both countries, AFD and the World Bank will jointly contribute to the funding of the results in select centers, according to the proportion of their overall funding to each of those centers. The World Bank and AFD signed a co-financing framework agreement on June 13, 2018. Further, the World Bank and AFD will negotiate and sign a co-financing agreement specific to the proposed Second ACE Impact Project, which will aim to define, among others, services related to project implementation that the World Bank will provide to AFD and the related fees to be paid by AFD to the World Bank (see Annex 8 for further details).
2. **In Côte d’Ivoire, a complementary project which will support four ACEs (three of which have been supported by the World Bank under the ACE I Project) has been prepared by and will be solely funded by AFD in the amount of EUR 18 million (US$21 million equivalent)**. However, Côte d’Ivoire will be invited to participate in the regional activities and will be able to benefit from select technical services (all services except those related to fiduciary aspects – FM, procurement and safeguards) provided by the RFU under both ACE Impact projects. See Annex 8 for further details.

**Component 1: Establishing new and scaling up well-performing existing Africa Centers of Excellence for development impact (*Total: US$260 million equivalent of which IDA US$78.8 million equivalent, AFD co-financing US$51.2 million equivalent and government contribution US$130 million equivalent*)**

1. **Component 1 aims to build and strengthen the capacity of 23[[12]](#footnote-13) competitively selected centers and one School of Engineering located in higher education institutions across West and Central Africa.** Component 1 has two sub-components: Sub-component 1.1 will establish 14 New ACE Impact centers for skills development and knowledge generation (through applied research) to address development challenges that are not addressed under the ACE I Project. Sub-component 1.2 will provide additional support to nine well-performing ACE centers participating in the ongoing ACE I Project (these ACE Impact centers will be referred to as *Renewal centers*) to scale-up impact on development challenges, to strengthen regional collaboration, and to ensure that these centers are fully fiscally sustainable. Additional funding will support one engineering and technology institution/college (CoEngg) in Benin, hosting an ACE center under Sub-components 1.1 and 1.2, to broaden capacity, and to enhance the potential for long-term sustainability and institutional impact.
2. **Each ACE Impact center (*New and Renewal centers*) supported will focus on a specific regional development challenge.** See below pre-identified regional development challenges, while Annex 6 lists all funded thematic areas. Each of these centers is targeted in scope and will deliver postgraduate education and applied research programs developed in coordination with relevant stakeholders. While the centers’ work plans are focused, a multidisciplinary approach will be essential to achieving the goals of each center.
3. Provided below are details on key aspects of establishing the New ACEs and scaling up the Renewal centers, under the proposed project:
4. **ACE’s strategic objectives and activities:** Each center will scale-up postgraduate education, applied collaborative research and outreach to address regional development challenges. This will be achieved through: higher quality postgraduate education addressing the skills gap and tackling priority applied research questions; leading regional education networks; and delivering short-term courses, for example, a two-week course for mid-career professionals. In consultation with stakeholders, the centers will update and/or launch new postgraduate (master’s and Ph.D.) degree programs that are accredited to meet international quality standards. The centers will offer curricula that ensure that students have the in-demand competencies upon graduating from their degree programs, including analytical, digital skills, and entrepreneurial competencies. Partnerships with national, regional, and global sectoral actors will ensure that the ACEs focus their activities on education and research to solve specific problems associated with development challenges. Centers will disseminate their research findings to policymakers and companies and also through international peer reviewed journals. Further, each center will be required to have policies backed by specific interventions in place to: (a) increase the number of females within their student body, faculty and academic leadership. The activities include additional training, mentoring, and funding of female students and faculty as well as regional peer learning among centers, as described in a guidance note to centers on the promotion of women in STEM; and (b) ensure the overall positive well-being of their students. Greater emphasis will be placed on ensuring ACE host institutions are incentivized to undertake several activities, including those that promote: good governance; data collection and management; and regionalization of their institutions towards making their institutions regionally (and globally) competitive.
5. **Strategic and competitive selection of ACEs:** The evaluation and selection process which covered proposals from all countries aiming to participate in both the First and proposed Second ACE Impact projects was rigorous, transparent, merit-based and consistent with international standards for higher education and research funding organizations. The evaluation process consisted of a two-stage desk evaluation (individual expert evaluations and a panel evaluation) and site visits that were performed by several independent evaluation experts from SSA, the diaspora and across the globe. The selection process was designed to ensure that selected ACE Impact centers will collectively address many of the region’s specific development challenges and promote a balanced portfolio of ACEs in terms of New and Renewal centers and their focus areas, countries and language groups participating in the project. Of the 105 eligible proposals submitted, the Ministerial level (see Section III.A for the description of the two-level PSC) of the PSC selected 44 ACEs (later reduced to 43 ACEs) of which 23 centers are supported under the proposed Second ACE Impact project based on the recommendations of evaluation experts, applying objective criteria.
6. **The pre-identified (targeted) regional development challenges:** Although all centers will address a regional development challenge, 15 of the 43 First and proposed Second ACE Impact centers were selected to address critical pre-identified regional shortages of skills and knowledge. In consultation with regional governments, the private sector, and other regional stakeholders, a set of Terms of Reference (ToRs) with expected educational and applied research outcomes were prepared for each of the following 11 pre-identified thematic areas: water, digital development (ICT), power and renewable energy (energy), urban design, coastal degradation, social risk management (includes environmental science and applied impact assessment), education, transport-logistics, quantitative economics, procurement and nursing/health professionals. At least one proposal was selected within each area with the exception of procurement (the one proposal was of low quality) and social risk management (no proposals were submitted). However, one of the selected centers will receive add-on funding to offer programs in social risk management.
7. **Center funding:** The governments, selected universities, AFD and the World Bank have defined the allocation of funds to the centers based on the funding needs of each center (taking into consideration the thematic area) and the host country’s priorities. Each center’s funds have been distributed across a set of disbursement-linked indicators/results (DLIs/DLRs). These DLIs are pre-identified indicators that once achieved by the center and independently verified, will qualify for disbursement of a pre-determined amount. The disbursements will be made against the center’s eligible expenditure program (EEP) which is part of the annual budget of its host institution. The EEPs consist of salaries, scholarships and operating costs. A detailed description of the disbursement approach is provided in Section IV.B. Each university will sign a Performance and Funding Agreement (PFA) with its government. These agreements will include the following stipulations:

* New centers may allocate up to 25 percent of funding for civil works;
* At least 15 percent of the funds will be invested in partnership activities. Partnership agreements between ACEs and their partners will include a detailed work plan, budget and agreed results;
* Between 10 and 20 percent of the amount of funding will go towards the ACE host institution’s activities - focused on institutional impact - which will be included in the implementation plan and annual work plans of the ACE. The exact allocation will be indicated in DLI tables developed for each center. Heads of the host institutions will be encouraged to undertake activities that link to the sustainability of the centers they host during project implementation;
* Government and institutional contributions (in-kind, staffing and financing) for the center’s establishment and long-term sustainability beyond the Second ACE Impact Project funding are expected; and
* Based upon performance, the amount of funding provided to each center and usage of the funding can be adjusted by the World Bank in consultation with the respective ACE host government. At mid-term, expected to be two years after signing the PFA, there will be a thorough evaluation of performance and the grant supporting each center will be reviewed. In particular, it is expected that poor performing centers will have their grant reduced by 50 percent of the uncommitted amount that is above half of their grant. This additional funding will be made available to well-performing institutions that are well performing. These gradual and automatic reductions in grant amounts seek to reduce the risk of having large funds committed to institutions that are slower in achieving results and implementation.

***Sub-component 1.1: Support to establish new centers of excellence (Total: US$166 million equivalent of which IDA US$51.5 million equivalent, AFD co-financing US$31.5 million equivalent and government contribution is US$83 million equivalent)***

1. **Sub-component 1.1 aims to support the establishment of 14 New ACE Impact centers and increase the number of quality centers and relevant programs offered in the region and to introduce New thematic areas that do not exist in the ACE I Project.** All Second ACE Impact countries, except The Gambia, will have at least one New ACE. This sub-component will provide US$5 million- US$6 million to each center to fund its activities. The funding allocation to each center depends on the thematic area, the overall funding needs indicated in the center’s proposal, the funding envelope of the center’s government and their government’s priorities. The release of IDA funds will be linked to the achievement of seven DLIs: (i) Institutional readiness results (DLI1); (ii) development impact of the ACE Impact Center (DLI2); (iii) quantity of students with focus on gender and regionalization (DLI3); (iv) quality of education and research through international accreditation, research publication and improved teaching and research infrastructure (DLI4); (v) relevance of education and research through externally generated revenue internships and entrepreneurship (DLI5); (vi) timeliness and quality of fiduciary management (DLI6); and (vii) Institutional impact- to be accomplished by the ACE host institution (DLI 7). The disbursement amount by result is uniform across centers and countries for DLI3, DLI4, DLI5, and DLI 7, because a unit cost can reasonably be established for these results, for instance, a unit cost for a student or a research publication. Disbursement amounts for DLI1, DLI2, and DLI6 differ by center because they are relative to the center’s funding envelope, because the results are related to the overall performance of the center, notably implementation readiness, impact of center as it addresses development challenges and fiduciary management. Under DLI 7, Nigeria requested that its selected universities participate in enhanced ICT services offered by their National Research and Education Network (NREN) (See Section VI Results Framework and Monitoring for full description of DLI 7 in relation to the NREN).

***Sub-component 1.2: Support to scale-up well performing ACE I centers (Total: US$94 million equivalent of which IDA US$27.3 million equivalent, AFD co-financing US$19.7 million equivalent and government contribution US$47 million equivalent)***

1. **Sub-component 1.2 aims to provide additional funding and support to nine existing ACEs (currently supported under the ACE I Project) to enable them to scale-up their activities and deepen their development impact.** All participating ACE I countries except The Gambia (i.e., Benin, Nigeria and Togo) in the proposed Second ACE Impact Project have at least one of their ACE I centers participating in this sub-component as a Renewal center. Funding under this sub-component will help these centers to: strengthen productive partnerships with industry, sectoral stakeholders, ministries and policymakers; boost their regional leadership of regional networks; lead efforts in the training of quality postgraduate students and maintain their international accreditation; and act as drivers of applied research solutions to development challenges in the region. The initial funding to Renewal centers is from US$4 million – US$5 million. This is equivalent to approximately half the amount of funding previously provided under the ACE I Project, with the expectation that most of these centers will not require capital intensive civil works at the levels they needed under the ACE I Project. Further, these ACEs will be supported to increase their fundraising efforts to become fully sustainable after this round of funding. The allocation to each center will depend upon the thematic area, overall funding needs indicated in the center’s proposal, the funding envelope of the center’s government, and the government’s priorities. While the release of IDA funds will be linked to the achievement of the same seven DLIs listed under Sub-component 1.1 above, the DLI amounts for each center under Sub-component 1.2 will vary between ACEs to allow for customization of expected results to each center’s specific objectives. The specific amounts for each center are provided in the POM.

***Additional support to engineering and technology ACE host institutions***

1. **One institution that is selected to host an engineering or technology-focused center with capacity in other engineering disciplines will receive additional funding in IDA support**. Benin has one institution that fits this profile. This funding will support an institution-wide strengthening of the engineering and technology programs within their College or School of Engineering (CoEngg).[[13]](#footnote-14) The CoEngg are expected to meet the same seven DLIs just as its ACE/Emerging center to incentivize the scaling-up of enrollment of undergraduates (including enrollment of females); achieving international quality standards; introducing new academic programs; promoting project-based learning and innovative pedagogy; establishing new laboratories; enabling technology transfer and business/entrepreneurship; building linkages to business programs; enhancing teaching and research capacity; and promoting institutional transformation in terms of policies and operations. These activities are expected to strengthen the capacity at the CoEngg, and enhance the potential for long-term sustainability of the Center and the broader CoEngg. This type of support did not exist under the ACE I or ACE II projects.

**Component 2: Fostering regional partnerships and scholarships (*Total: US$42 million equivalent of which IDA US$24 million equivalent and government contribution US$18 million equivalent*)**

1. **Component 2 seeks to expand the regional impact of the ACEs funded under Component 1 by providing demand-side funding for partnering institutions and regional students to purchase training and consulting services from the ACEs that are most relevant to their teaching and research goals.** Component 2 has two sub-components: Sub-component 2.1 will finance regional institutional partnerships through support to Emerging centers, while Sub-component 2.2 is optional and will finance governments’ contribution towards the PASET RSIF.

***Sub-component 2.1: Support to Emerging centers (non-ACEs) for networking, regional technical assistance and improving learning environment (Total: US$36 million equivalent of which IDA is US$18 million equivalent, and government contribution is US$18 million equivalent)***

1. **Sub-component 2.1 will support three Emerging centers to develop regional institutional partnerships with ACEs (under Component 1) and other relevant international partners to strengthen the capacity of their higher education institutions.** These Emerging centers will be in the form of a department/school or a multidisciplinary center within an institution. Participating countries eligible for support under this sub-component are those that did not receive support to establish ACE I centers, notably Niger (two centers - one in Mining environment and the other in Teaching-Learning of Mathematics and Sciences) and The Gambia (one center in Science, Technology and Engineering for Entrepreneurship).
2. **Strategic objectives and activities:** Supported institutions will receive funding to strengthen, through partnerships, both undergraduate and postgraduate (focus is more on master’s level than PhD) education programs that will provide training to their students and develop in them the skills which will be useful in addressing national development needs of the country hosting the center. Emerging centers to be established under this sub-component will receive support for activities including: regional technical assistance (TA) to strengthen academic programs and curriculum design; faculty scholarships and training; costs of visiting faculty; TA for institutional policies and practices; improving teaching and research resources; and other regional engagements.
3. **Strategic and non-competitive selection of Emerging centers:** The three Emerging centers, selected non-competitively, will receive funding based on their strategic importance for achieving national development objectives (see Table 3 for thematic distribution of centers). Although non-competitive, these institutions, in conjunction with national higher education authorities, were required to submit strong proposals with specific strategic targets in order to receive financial support. They received upfront proposal writing support. To strengthen the academic support base of these three centers, they will each be mapped to the regional network of an ACE Impact center supported under Component 1, that is focusing on a similar thematic area.
4. **Emerging center funding:** The government, their Emerging center institutions and the World Bank will discuss the allocation of funding to these centers based on the funding needs of each center and the priorities of the host country of the centers (see Table 4 for estimated country allocations for all Sub-components). Each center’s funds will be distributed across the relevant DLIs/DLRs. These centers will be expected to meet the same seven DLIs as ACE Impact centers, with a large share of the DLIs to incentivize results for improved undergraduate and master’s programs. Similar to disbursements under Component 1, up to a capped amount will be disbursed against specific EEPs (salaries, scholarships and operating costs) in the annual budget of each center and its host institution, conditioned on the achievement of the specified DLIs. Each institution will sign a PFA with its government. These agreements will include requirements stipulating that:

* At least 30 percent of funding for each center under this sub-component will be invested in regional partnerships (with New or Renewal ACEs that have been selected to receive support under Component 1) and international institutional partnerships (with other institutions outside the ACEs and the region - especially for sectors for which no ACE Impact center exists). Funds can be used to cover regional TA to strengthen academic programs, curriculum design, institutional policies and practices; faculty scholarships and training; and costs of visiting faculty; and
* The remaining 70 percent of the funding will support investment in teaching, learning and research equipment and other hardware necessary for regional partnerships and supporting institutional transformation.

**Table 3. *Distribution of Centers (New, Renewals & Emerging) by Country and thematic cluster\*\****

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Thematic area** | **Benin** | **The Gambia** | **Niger** | **Nigeria** | **Togo** | **Total** |
| **STEM** | 2 | 1\* | 1\* | 7 | 1 | **12** |
| **Agriculture** | - | - | 1 | 2 | 1 | **4** |
| **Health** | - | - | - | 7 | - | **7** |
| **Applied Social Sciences/Education** | - | - | 1\* | 1 | 1 | **3** |
| **Total** | **2** | **1** | **3** | **17** | **3** | **26** |
| **Add-on CoEngg** | 1 | **-** | **-** | **-** | **-** | **1** |

*Note: \*These cells denote Emerging centers. Annex 1, Table A1.1 provides detailed information on all centers. \*\*AFD’s funding in Côte d’Ivoire covers 2 ACEs in STEM, 1 ACE in Agriculture and 1 ACE in Applied Social Sciences*

***Sub-component 2.2: Support for PhD scholarships through the PASET Regional Scholarship & Innovation Fund (RSIF) (Total: US$6 million equivalent IDA)***

1. **Sub-component 2.2 will finance regional scholarships through the PASET RSIF to support primarily the training of the next generation of faculty for higher education institutions in the region.** Two countries, Benin and Nigeria, will contribute US$2 million and US$4 million, respectively, to the RSIF. This sub-component will build institutional capacity to support improvements in the quality and quantity of academic staff in the region’s higher education.
2. **The RSIF, a competitive pan-African Scholarship program, provides PhD scholarships to top-performing master’s students with the aim of creating a strong pipeline of faculty and researchers in applied sciences, engineering and technology fields**. Five countries (Côte d’Ivoire, Ethiopia, Kenya, Rwanda and Senegal) have taken the lead in committing US$2 million each to the RSIF established by African governments in 2015. The World Bank-financed RSIF Project (P165581), approved in 2018, received US$15 million and US$10 million from the World Bank and South Korea, respectively. Under the First ACE Impact Project, Burkina Faso, Ghana and Senegal will contribute US$2 million each to the RSIF. The RSIF seeks to serve as a pan-African platform that will scale-up the African-led fund to finance the continent’s top students in S&T to pursue their studies in Africa, while providing them with opportunities through a sandwich program[[14]](#footnote-15) to carry out part of their research at top international partner institutions. Under the Second ACE Impact Project, the funds allocated to the RSIF will be disbursed directly to the RSIF established and managed under the RSIF project, pursuant to subsidiary agreements signed between each contributing country and the implementing entity of the Fund (the International Center of Insect Physiology and Ecology- *icipe*). The RSIF project will be responsible for supervision (including technical, fiduciary and safeguards) of all funds transferred to the Fund from the Second ACE Impact Project. The RSIF team will provide data on key indicators to report on progress in the Second ACE Impact Project’s [*Implementation Status and Results Reports (ISR*](https://worldbankgroup.sharepoint.com/sites/Waterpractice/SitePages/Detail.aspx/Events/mode=view?_Id=1469&SiteURL=/sites/Waterpractice/)*s*) and [*Implementation Completion and Results Report (ICR*](https://worldbankgroup.sharepoint.com/sites/wbsites/independent-evaluation-group/SitePages/Detail.aspx/Documents/mode=view?_Id=287&SiteURL=/sites/wbsites/independent-evaluation-group/)).

**Component 3: Enhancing national and regional level project facilitation, and monitoring and evaluation (*Total: US$12.5 million equivalent IDA*)**

***Sub-component 3.1: Regional-level project facilitation and monitoring and evaluation (Total: US$5 million equivalent IDA)***

1. Through a regional IDA grant of US$5 million, Sub-component 3.1 will fund the AAU, which is the RFU for the ACE I and the First ACE Impact projects, to enable it to fully serve as the RFU for the proposed Second ACE Impact Project. The RFU will facilitate the regional activities and support the centers under the proposed project, including M&E activities such as development of an online M&E database platform, verification of results, benchmarking of ACE host universities, and graduate tracer studies; site supervision visits of ACEs by independent experts; communications, safeguards support, capacity-building; and knowledge-sharing and networking among ACEs and governments. The RFU will also liaise with ongoing regional and national initiatives in order to strengthen the ACE regional networks, including through digital networking platforms.

***Sub-component 3.2: National-level project facilitation (Total: US$7.5 million equivalent IDA)***

1. This sub-component will finance project implementation support at the national level, specifically in Nigeria, where the Second ACE Impact Project investment exceeds US$25 million (17 ACEs) and in The Gambia, where the Emerging center needs additional support from a coordinating agency. Nigeria will receive US$6 million and The Gambia US$1.5 million under this sub-component. The National Universities Commission (NUC) of Nigeria and the Project Coordination Unit (PCU-Gambia), will serve as the national-level facilitator in Nigeria and The Gambia, respectively. The NUC has played this role successfully under the ACE I Project. The PCU-Gambia is currently managing a couple of other World Bank projects, including the ACE I Project. Performance of these national-level facilitation agencies will be measured by the degree to which the ACE Impact centers in the respective countries achieve the project objectives, including adherence to fiduciary, safeguard and anti-corruption guidelines. The activities will include supervision and training related to educational, research, implementation, fiduciary and safeguards aspects, as well as national M&E and minor TA. In the case of The Gambia, the PCU’s key role will be to provide fiduciary support to the participating institution in The Gambia.

**Unallocated (Total: *US$15.7 million equivalent IDA*)**

1. **An amount of US$15.7 million will be designated as unallocated funds.** At the mid-term review (MTR) of the ACE I Project; a restructuring of the project was necessary in order to reallocate funding from less-performing centers to better-performing ACEs in the same country. In this case where there was one ACE I center in a country and the center was low performing, a partial cancellation of funds took place due to low performance. This process was difficult. To avoid removing or cancelling funds from poor performing centers, a varying amount of each country’s funding envelope will remain unallocated. The funds will remain within each country. These unallocated funds will be allocated during project implementation to either: (i) centers and host universities that are producing strong results to further improve overall impact; or (ii) unforeseen but necessary activities critical for the achievement of the PDO. Following an evaluation of the performance of ACE centers at the MTR, the World Bank in discussion with governments will decide which ACE centers will receive the unallocated funding within each country’s funding envelope.

**Table 4. *IDA Funding Allocation for Participating Countries Showing Estimated Breakdown by Components/Sub-components (US$ million equivalent)***

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Participating Countries and the RFU** | **Total Funding**  **($US million)** | **Source** | | **Components** | | | | | | | | | | | |
| **IDA Credit/ Grant** | **AFD Credit** | **Component 1**  **New and Renewal ACEs (*ACE Impact centers*)** | | | | | | **Component 2**  **Regional partnerships & Scholarships** | | | | **Component 3 Natl. & Reg. level facilitation & M&E** | **Unallocated** |
| **Total Funding**  **($US million)** | **Total Funding**  **($US million)** | **Sub-comp. 1.1**  **New ACEs** | | **Sub-comp. 1.2**  **ACE I Renewals** | | | **Comp. 1 Total**  **(US$ million)** | **Sub-comp 2.1 Emerging Centers** | | **Sub-comp 2.2 PASET RSIF** | **Comp. 2 Total**  **(US$ million)** | **Comp. 3**  **Total**  **(US$ million)** | **Unallocated**  **Total**  **(US$ million)** |
| **No. of ACEs** | **Amount**  **(US$ million)** | **No. of ACEs** | **Amount**  **(US$ million)** | **Add-on (\*COENGG)**  **Amount**  **(US$ million)** | **No. of Centers** | **Amount**  **(US$ million)** | **Amount**  **(US$ million)** |
| **Benin** | **17.2** | **6** | **11.2** | **1** | **6** | 1 | 4 | 4 | **14** | 0 | 0 | 2 | **2** | **0** | 1.2 |
| **The Gambia** | **12** | **12** | **0** | **0** | **0** | 0 | 0 | 0 | **0** | 1 | 9 | 0 | **9** | **1.5** | 1.5 |
| **Niger** | **15** | **15** | **0** | **1** | **5** | 0 | 0 | 0 | **5** | 2 | 9 | 0 | **9** | **0** | 1 |
| **Nigeria** | **115** | **75** | **40** | **10** | **60** | 7 | 35 | 0 | **95** | 0 | 0 | 4 | **4** | **6** | 10 |
| **Togo** | **18** | **18** | **0** | **2** | **12** | 1 | 4 | 0 | **16** | 0 | 0 | 0 | **0** | **0** | 2 |
| **AAU** | **5** | **5** |  |  |  |  |  |  |  |  |  |  |  | **5** |  |
| **Total** | **182.2** | **131** | **51.2** | **14** | **83** | **9** | **43** | **4** | **130** | **3** | **18** | **6** | **24** | **12.5** | **15.7** |

1. **Based on the current IDA envelope and consultation between the World Bank and participating national governments, project components will be financed as indicated in Table 5 below.**

**Table 5. *Funding Envelope and Sources of Funding for Participating Countries (equivalent US$ million)***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Country/**  **Organization** |  | |  | | **Sources of Funds** | | |
| **Total Project Cost** | **Govt. Funding\*** | | **AFD Credit** | | **IDA Credit** | **IDA Grant** |
| Benin | 31.2 | 14 | | 11.2 | | 2 | 4 |
| The Gambia | 21.0 | 9 | | 0 | |  | 12 |
| Niger | 29 | 14 | | 0 | | 5 | 10 |
| Nigeria | 210 | 95 | | 40 | | 75 | - |
| Togo | 34 | 16 | | 0 | | 12 | 6 |
| AAU (RFU) | 5 | - | | - | | - | 5 |
| **Total** | **330.2** | **148** | | **51.2** | | **94** | **37** |

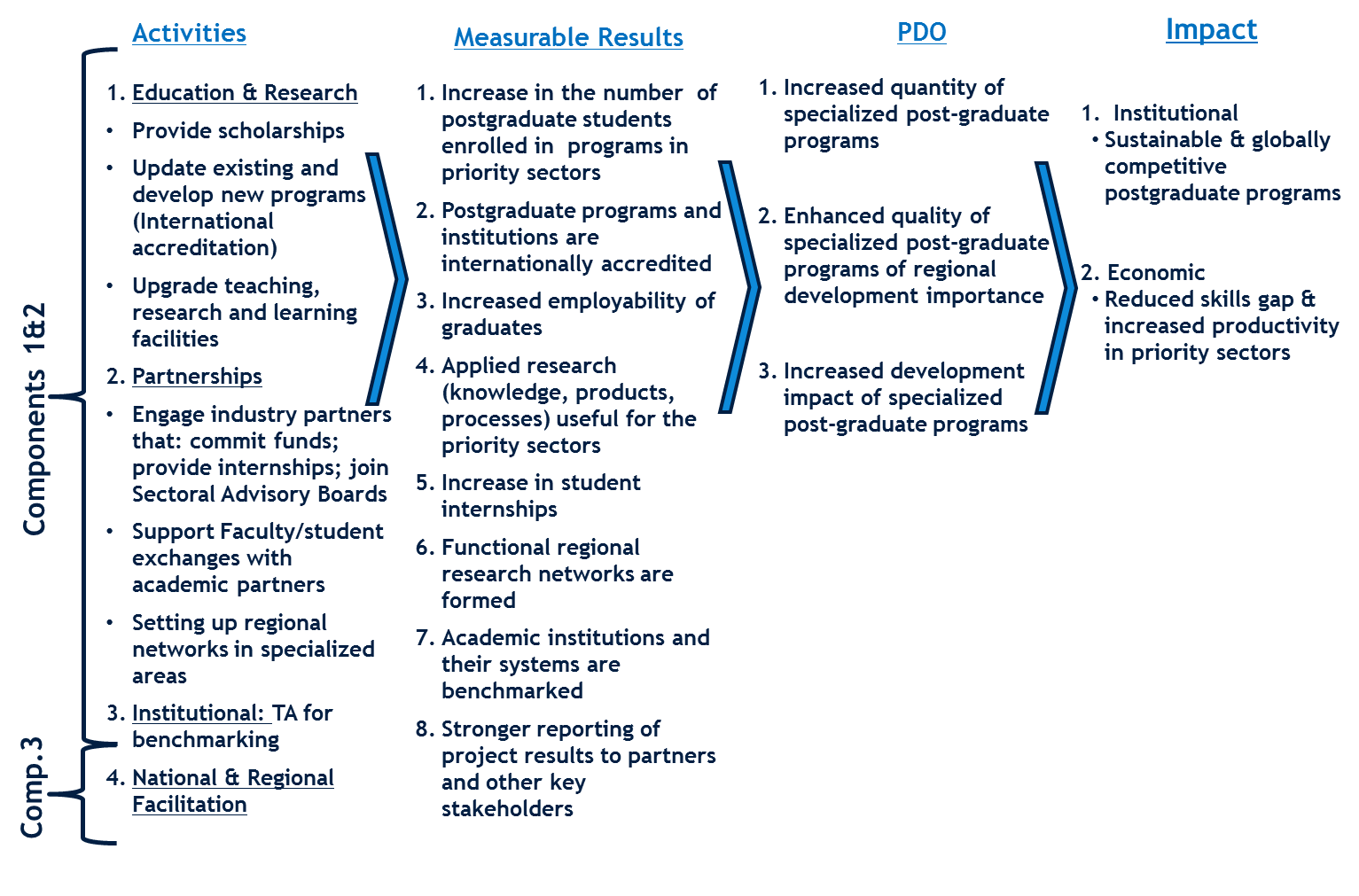
*Note: \*The countries’ contribution to the project cost is the estimated amount required for the salaries of the staff of the ACEs and other university personnel.*

1. **The proposed project will use an Investment Project Financing (IPF) lending instrument with RBF for Sub-components 1.1, 1.2 and 2.1 following the successful experience of this approach under the ACE I Project.** Component 3 will, however, use the standard disbursement approach.RBF through DLIs has been an effective and innovative tool under the ACE I Project to focus university teams around the expected results of the project. In particular, the significant resources linked to the attainment of international accreditation, internships, regional students’ recruitment, and revenue generation constitute an important incentive towards achieving these results. Further, the RBF approach necessitates a stringent verification process of students, learning infrastructure and equipment, etc. which disciplines all partners in the reporting and attainment of the results. The specific results (or DLRs) expected under each DLI are presented in Section VI. The expected results under the Second ACE Impact are similar to the expected results of the ACE I and II projects, but with some improvements. A matrix showing the differences in the DLRs for ACE I, II and the First and Second ACE Impact projects is provided in Annex 3.

|  |
| --- |
| **C. Project Beneficiaries** |

1. **The proposed project aims to benefit the following:**
2. Students in selected ACEs and those enrolled in the ACE host institutions, as well as students in partner institutions across West and Central Africa. Further, current and future students will have an expanded choice of quality and development-related education programs within West and Central Africa;
3. Faculty and staff from the ACEs, host institutions and partner institutions who improve their qualifications and teaching and research conditions;
4. Employers and other knowledge partners, including Ministries and public entities, who will have easier access to highly skilled professionals and to applied research for solutions to pressing development challenges; and
5. The general population in West and Central Africa who will benefit from a network of dynamic university centers focused on the generation of skills and applied research to drive development.

|  |
| --- |
| **D. Results Chain** |

**Theory of Change**

|  |
| --- |
| **E. Rationale for World Bank Involvement and Role of Partners** |

**Rationale for World Bank Involvement**

1. **The World Bank is well placed to play a leading role in supporting the expansion and quality improvements in higher education in West and Central Africa through a regional-level project because of its experience, funding, convening power and fiduciary oversight.** First, the World Bank brings a wealth of experience from its higher education work across the globe and can draw upon lessons from both national and regional projects from SSA and other regions, most notably the ACE I and ACE II projects. The World Bank has substantial expertise across several sectors and has undertaken in-depth analyses on the state of higher education and the skills gap across various economic sectors in the countries and region as a whole. Second, due to the World Bank’s strong financial standing, it provides adequate funding in the form of credits and grants, with favorable terms, to participating countries to support such a regional project. Third, the World Bank’s convening power is critical in bringing together the relevant stakeholders from governments, industries, universities and research institutes, regional bodies (ECOWAS, AAU, West African Economic and Monetary Union([*Union Economique et Monétaire Ouest Africaine*](http://www.uemoa.int/fr)*,* UEMOA)) and other DPs to collaborate on the project. Fourth, the World Bank’s history of strong fiduciary oversight makes it appealing for the participating governments and DPs.

**Role of Partners**

1. **The proposed project is expected to benefit from a variety of co- and parallel- financing support actions from bilateral partners that have been investing in the region over the years with similar objectives to those of the ACE projects.** Co-financing will be used to support project activities, and additional funding is anticipated in the form of top-up awards to targeted centers. Leading global research funding agencies are expected to launch targeted calls and actions to support bilateral and multilateral collaborations between researchers at the ACE Impact centers and those based internationally.
2. **AFD will be a co-financier of the proposed project, by co-financing ACEs in Benin, and Nigeria. Furthermore, AFD is preparing a EUR 6 million grant to support regional collaboration activities aligned with the First and Second ACE Impact PDOs and activities.** AFD’s grant will support building and/or strengthening sustainable research networking between ACEs and other partners on specific topics. Specifically, this grant would support four-five thematic networks from the following: (i) mining and environment; (ii) water; (iii) ICT; (iv) infectious diseases; and (v) sustainable power. The implementation scheme is currently being discussed with the World Bank and the centers to address critical needs (aligned with the DLIs), avoid duplication and minimize complexity. The AFD grant will fund: research performing organizations, higher education institutions, and quality assurance experts to support these interventions. The French National Research Institute for Sustainable Development (*Institut de Recherche pour le Développement* - IRD) will serve as the technical coordinating agency for the regional grant. The approval of the Nigeria and Benin projects by the AFD Board of Directors are expected in December 2019 and January 2020, respectively. In addition, AFD will finance Côte d’Ivoire in a separate but related project. The funding allocation for that project was approved by the AFD Board of Directors in July 2019.
3. **Research chairs supported by DPs will provide additional resources and academic capacity to ACE Impact centers.** The Canadian International Development Research Center (IDRC), the German Ministry of Education and Research *(Bundesministerium für Bildung und Forschung,* BMBF) and the German Academic Exchange Service (*Deutscher Akademischer Austauschdienst*, DAAD) are considering financing research chairs at selected ACE Impact centers.

These research chairs will further strengthen faculty capacity at the centers, leverage the centers’ resources to accelerate and sustain research programs anchored in world-class academic practices and deepen partnerships with collaborators in the funding country.

1. **Additional support for academic partnerships with international collaborators** is expected from leading research funding agencies and research organizations following the selection of ACE Impact centers. These agencies and organizations will share the list of selected ACE Centers with a focus on researchers who have ongoing collaboration with African partners. Research funders include the French National Research Agency (*Agence Nationale de la Recherche,* ANR) (France), the German Research Foundation (*Deutsche Forschungsgemeinschaft,* DFG) and BMBF/DLR (Germany), United Kingdom Research and Innovation (UKRI) and the United States National Science Foundation, USA (NSF) who have committed to workshops with ACE Impact centers on research topics of common interest and anticipate supporting research collaborations between their national researchers and ACE Impact centers. DAAD has supported a study tour to Germany for selected center directors to facilitate connections and future collaborations. Research organizations including the National Center for Scientific Research ([*Center National de la Recherche Scientifique*](https://www.cnrs.fr/), CNRS) and the IRD already provide financial support to researchers associated with centers planning on responding to the Call for Proposals. For Centers to achieve long-term financial sustainability, it is essential that they seek and obtain competitive research funding.
2. **Several public and private sector partners in relevant sectors are expected to commit financial resources to ACE Impact centers.** Industry and sectoral stakeholders are essential for ensuring long-term financial and academic sustainability of ACE Impact centers.

|  |
| --- |
| **F. Lessons Learned and Reflected in the Project Design** |

1. **The ACE Impact projects benefit from lessons learned under the ACE I and ACE II projects as well as other World Bank-financed projects in other regions and global best practices.** Key drivers for successful ACE centers have been: capable faculty teams; strong government and university ownership; and visionary center directors that have attracted relevant international partners as well as additional donor funding. Despite these achievements, the development impact of these centers can be further strengthened through: (i) more targeted selection of centers to more effectively respond to the regional demands for skills and research; (ii) improved upfront linkages to industry; (iii) increased institutional impact on the ACE host university; and (iv) better coordination with regional and international partners. The outcome of consultations with ACE I center leadership, experts involved in evaluating the current centers, national governments, Ministers of Education, and World Bank staff (both at the country and GP levels) were incorporated into the design of the First and Second ACE Impact projects (see Table A1.2 in Annex 1) for the summary of stakeholders consulted during project preparation). Lessons learned which have been incorporated into the project’s design, particularly in the Call for Proposals stage, evaluation and selection processes, the DLI disbursement and verification protocols and project implementation, include, *inter alia*:
2. **Strengthened regional focus:** While ACE I centers have been successful in recruiting regional students (approaching the ACE I Project set target of 30 percent), there continues to be a need for stronger regional engagement of centers, including improved industry/sectoral partnerships and strengthened political buy-in. The ACE Impact projects will incorporate a strong regional engagement through various channels, including ECOWAS’ participation on the PSC, and the introduction of a two-tiered regional steering committee wherein the Committee meets annually at the Ministerial level and more frequently at the government representative level.
3. **Stronger national government and ministerial ownership:** It was evident during the preparatory phase of the proposed project that some Ministers responsible for higher education and from countries participating in the ACE I Project were not fully aware of the project nor the accomplishments of their national ACE I centers. The ACE Impact projects in addition to the national steering committees (NSCs) will convene an annual Ministerial PSC meeting to ensure that Ministers are fully informed of the progress of the overall program and to ensure stronger ownership of the achievements of their national centers. It is envisioned that each participating government, as part of the mandate of its NSC, will develop a national plan aimed at supporting the sustainability of their centers beyond the World Bank’s funding. The NSC and national focal points will be critical in ensuring that bottlenecks affecting their ACEs are solved at the country level.
4. **Improved institutional ownership:** In the ACE I Project, there appears to be a reasonable correlation between an ACE center’s success and the institutional support it receives. In the ACE Impact center selection process, there was a stronger focus on the evaluation of institutional support for proposed centers, and the design of DLIs that provide incentives to encourage institutional support for center activities.
5. **Strengthened institutional impact:** Successful ACE I centers implemented policies and practices aligned with global best practices for higher education. However, there is limited evidence that operational excellence of these centers has positively influenced institutional transformation beyond the centers. The ACE Impact projects will proactively encourage institutional impact: each proposal identifies specific anticipated interventions; and DLIs will reward the adoption of best practices at the institutional level. At least 10 percent of each center’s funding will be allocated to activities at the ACE host institutional level. In addition, under Component 1, substantial additional funding will be available to selected Colleges of Engineering and/or Technology – beyond that provided to the ACE Impact centers – with the specific purpose of strengthening the institutional impact of the project.
6. **Improved sectoral commitment to ACE Impact centers:** Given the scope of ACE Impact centers, a rapid implementation startup is essential to successfully complete the proposed work plan and achieve the DLR targets. The ACE Impact projects require that participating centers (including the Emerging centers) identify upfront the following:

* **A Sectoral Advisory Board (SAB)** to help guide the academic and applied research programs;
* **Industry/sectoral partners**, who will collaborate on applied research, provide internships for students, hire program graduates, and contribute financially to the sustainability of the center; and
* **Regional and Global Academic collaborators**, who contribute the necessary technical expertise to deliver the proposed teaching and research activities of the center, and who partner on international research collaborations that contribute to center sustainability.

Furthermore, in the proposal evaluation phase, the expert evaluators considered sectoral commitment both in the written proposal and through meetings with sectoral stakeholders during the on-site evaluations of potential ACE Impact centers.

1. **Strengthened strategic networking:** University-based research centers, whether in Africa or globally, rely upon networking to deliver on their work plans. Building relationships to recruit students, to strengthen capacity and impact across West and Central Africa, and to disseminate research results that address development challenges is integral to the success of ACE centers. The design of DLIs will provide incentives to ensure that centers focus on these critical activities.
2. **Increased gender-balance focus:** While progress is being made, targets for female postgraduate students under the ACE I Project are not being fully achieved. There are also no female directors of ACE I centers, and female faculty members are rare participants in ACE activities. Partly thanks to an explicit selection process that promoted selection of centers with female directors or deputy directors, there are now four female ACE Impact center directors or deputy center directors (across both ACE Impact projects). Addressing gender imbalances is an explicit part of the design of the Call for Proposals template and implementation plans, and the design of the selected DLIs will provide incentives to encourage greater female participation in all aspects of the centers.
3. **Stronger World Bank GP engagement:** In addition to the evolution of expectations for ACE Impact centers based on lessons learned from the ACE I Project, the World Bank ACE Impact team has prioritized greater internal World Bank GP engagement to strengthen the focus of ACE Impact centers in addressing key development challenges. During the project preparation phase, the project team led by the Education GP worked closely with other GPs (and other stakeholders) to develop ToRs for 10 targeted priority thematic areas. During project implementation, it is anticipated that GPs will be involved in providing implementation support to centers within their sector. At the center level, the inclusion of GPs in implementation support will result in stronger linkages with ongoing World Bank-financed projects, improved knowledge transfer, and career opportunities for graduates. Such engagements will complement national projects in higher education and other sectors and should lead to longer-term sustainability of the activities of the centers.

A working group composed of GP focal points will further disseminate implementation results and strengthen regional and cross-disciplinary knowledge sharing among ACE Impact centers.

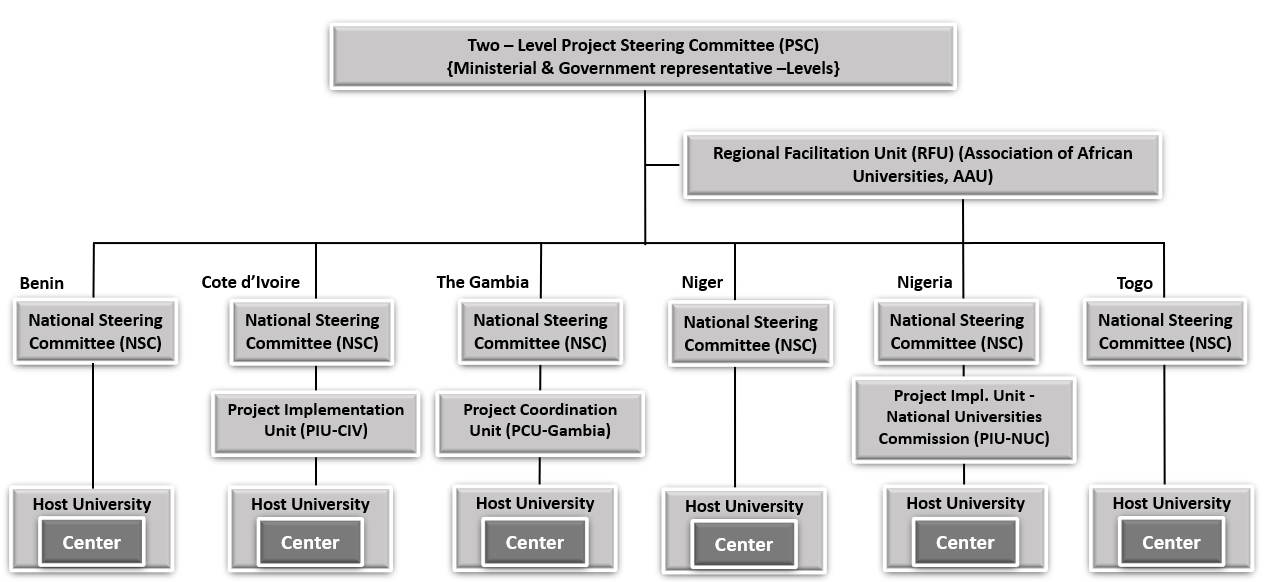
1. **Inclusion of unallocated funds:** During the implementation of the ACE I Project, the MTR determined that four centers had been performing below expectations. Although it was in the project’s and governments’ interest to reduce these centers’ funding and reallocate the funds to better performing centers within the same country, this proved to be a difficult process. Consequently, under the Second ACE Impact Project, each center will receive a smaller funding envelope at the beginning of implementation, and then well-performing centers in need of additional funding will be rewarded with the unallocated funds at the mid-term point in project implementation.
2. **M&E improvements:** The proposed improvements to the ACE I Project M&E process to be considered in the ACE Impact projects include: (a) a closer review by the RFU of the center submitted data for the reporting; (b) institutionalizing a Call and Email Test by the centers prior to the submission of results for verification; (c) maintaining strong and regular communication with the M&E officers at the centers throughout the verification process; (d) deepening the DLIs/DLRs definitions, expectations and scope of measurement (setting up a list of Frequently Asked Questions); (e) the RFU undertaking regular communication and coordination with the third party verifiers; (f) shortening the process for the verification of short-term students (a protocol and guidance for this is proposed); (g) institutionalizing M&E help desks and clinics for specific M&E challenges faced by centers; (h) breaking down language barriers by financing regional university collaboration and a flow of students assisted by scaling-up language course; (i) redefining the process for research publication verification; and (j) setting up an online M&E database platform with features for data submission, analysis and reporting.
3. **FM:** During the verification of the FM DLRs in the ACE I Project, many challenges were identified. Opportunities to address these challenges have been incorporated into the ACE Impact projects and cover strengthening transparency, audit committees and internal audit units. While the ACE I regional workshops provide an opportunity to clarify many aspects of the FM arrangements, further efforts will be needed to ensure the transfer of knowledge from the ACE Impact *Renewal centers* under Sub-component 1.2 to the *New centers* under Sub-components 1.1 and 2.1, are realized. For example, by leveraging and establishing knowledge sharing platforms (periodic workshops, secured online sharing of files, and Questions & Answers).
4. **Procurement DLIs:** There are lessons related to the use of procurement DLIs: (a) The timely submission of procurement audits DLI under the ACE I Project has worked well and there have been consistent improvements in these audits over the course of the ACE I Project. This DLI has been incorporated into the Second ACE Impact Project; (b) Improved incentivization of procurement planning - the DLI for timely, quality procurement has been reformulated to better incentivize Centers to improve procurement planning and procurement attribution; (c) Upfront hiring of project management and procurement capacity is part of the DLI 1 to ensure adequate capacity.

|  |
| --- |
| **III. IMPLEMENTATION ARRANGEMENTS** |

|  |
| --- |
| **A. Institutional and Implementation Arrangements** |
|  |

1. **Project implementation will draw heavily on the successful experience of the ACE I and II projects, where established implementation and supervision structures have been developed over the last four years.** The ACE I Project ISRs show a continuously satisfactory performance on progress towards achievement of the PDO and overall implementation progress. This is due to a working implementation model established through the project that incorporated several lessons along the way. Key elements of this working model are: (i) direct responsibility for implementation of the selected ACE center proposals led by the ACEs; (ii) strong regional coordination and TA at the regional level through the AAU; and (iii) consistent accountability and implementation support through the national and regional project steering committees. The implementation arrangements for the proposed Second ACE Impact Project will build upon these working structures and further strengthen the implementation arrangements for the additional three new countries to ensure that the project is not adversely affected by the increase in number of centers and participating countries (see Annexes 1 and 4 for further details on these implementation arrangements for the Second ACE Impact Project).
2. **The project’s organogram is presented below**.

**Figure 2. *Organogram of the Proposed Second ACE Impact Project***



*Note: Solid lines represent reporting lines; Both the First ACE Impact and Second ACE Impact Projects will share the same PSC and RFU (for the purposes of the PAD, only countries under Second ACE Impact and Côte d’Ivoire are shown).*

1. **Each selected higher education institution – whether benefitting from Component 1 or Sub-component 2.1 - will implement its own ACE Impact sub-project.** Each ACE Impact center will have an implementation team established to manage the project on a day-to-day basis. Each center will be responsible for its own strategic and implementation plans, fiduciary and M&E activities. The team will be led by the center director, who will be a recognized educator/researcher with expertise in the academic focus area of the center. The center director will be supported by a deputy director and faculty from all departments contributing to the center. Each center team will also consist of key staff members specializing in procurement, FM, M&E, communications and industry engagement who will support the center’s day-to day operations and assist with fiduciary tasks. The host university will provide to the centers administrative support and assistance on the safeguards tools to be developed by the centers. The center team will be advised by a SAB (composed of high-level representatives from the center’s industry/sector partners) and an International Academic Advisory Board (IAAB) (comprised of leading academics from around the world). Both the SAB and the IAAB will contribute to the development of the education programs of the center, and will also provide advice, insight and oversight for the applied research program and long-term sustainability plan. A student representative (non-staff) will be designated to represent the students of the center and will participate in the center’s staff meetings. ACE Impact centers supported under Component 1 will also lead regional networks in their areas of specialization (i.e., serve as research hubs). Each center will sign a partnership agreement with each of its partners with a detailed work plan, budget and expected outcomes. Annually, and based on a consultative approach, each center will develop a work plan (aligned with its implementation plan) that describes the education, research and operational activities that will be accomplished.
2. **Each national government participating in the Second ACE Impact Project will establish a National Steering Committee (NSC) facilitated by the Ministry or agency responsible for higher education.** The Committee will be tasked with undertaking a semi-annual review of implementation performance, and implementation planning and support. The NSC will review the FM and procurement annual audit reports (follow-up on recommendations in audit and review adherence to national procurement and FM guidelines), implementation plans, annual work plans, annual budgets, Interim Unaudited Financial Reports (IFRs), and results (achievements of DLRs and fund utilization) of the center(s) and national facilitation agency (in the case of The Gambia and Nigeria). The NSC will be the national level advocate for the center(s) and will foster linkages between the center(s) and government bodies and line ministries. The NSC will not be tasked with day-to-day implementation of the centers’ sub-projects at each institution. While the composition of the NSC will be at the discretion of each participating country, it is anticipated that the Minister or head of agency in charge of higher education will designate a chair who will convene the committee, which will include members from the Ministry of Finance (MoF) as well as the relevant line ministries for the focus areas of each ACE Impact center in that country (e.g., health, water, transport, energy, etc.)
3. **The ACE Impact PSC will provide overall guidance and oversight for the project.** The PSC is responsible for ensuring that the PDO is achieved. The PSC will be comprised of two levels: Ministerial and government representative. The Ministerial-level PSC will be comprised of the Ministers in charge of higher education in the participating countries (for both First ACE Impact Project and Second ACE Impact Project), whereas the representative-level PSC will be comprised of representatives (senior advisors) appointed by these Ministers. Representatives from the ECOWAS Commission and UEMOA, other relevant regional bodies where necessary, recognized African and international academicians, vice chancellors (2), sector representatives, and key private sector stakeholders will be selected to participate in the PSC meetings. The Ministerial-level PSC will be the highest decision-making body within the institutional structure of the project. The representative level PSC will oversee the implementation of the decisions of the Ministerial level. An ACE Impact focal point may also be appointed to support their respective PSC representatives in their duties. The Chair of the PSC will rotate to the government hosting the meeting.
4. **Under Component 3 of the proposed Second ACE Impact Project, AAU (also the RFU for the First ACE Impact Project) will receive a regional grant for facilitating support to Component 1 and Sub-component 2.1.** This funding builds upon the AAU’s experience in a similar role for ACE I. The work plan for AAU will be determined annually between the World Bank and the PSC. The World Bank will assess AAU’s performance against the approved RFU annual workplan based on agreed performance metrics. The AAU will recruit a full time ACE Impact Project Manager who will, among other responsibilities, lead the RFU, be a member of the AAU Project management team, and report to the AAU Secretary General. The AAU coordinated the Call for Proposals and the evaluation and selection of the centers during project preparation. During implementation, AAU will: (1) facilitate semi-annual project meetings; (2) promote partnerships among centers and between centers and partners (academic and sectoral) outside of the ACE networks; (3) coordinate TA and support to centers from subject-matter experts and other capacity-building activities; (4) coordinate project M&E and support related activities, including benchmarking exercises and graduate tracer studies; (5) facilitate verification of achievement of DLRs; (6) serve as the secretariat of the PSC and facilitate and fund its meetings and functions; and (7) develop key documents such as the POM and ToRs for consultants hired to work on project related activities.
5. **A small project team in place at the NUC (Nigeria) and the PCU-Gambia will facilitate implementation of the Second ACE Impact Project in Nigeria and The Gambia, respectively.** In Nigeria, this is necessary given the larger number of centers that Nigeria will host which will require a consolidated facilitation at the national level. In the case of The Gambia, the fiduciary capacity of the Emerging center needs to be built and hence this national support for coordination. The PCU-Gambia is currently implementing other World Bank-financed projects in the Education sector and so is familiar with World Bank processes and procedures. The NUC is playing a similar coordinating role for the ten ACE I Nigerian centers and serving on the ACE I PSC and will do so in a much more structured arrangement for the proposed Second ACE Impact Project. Specifically, the NUC will setup a Project Implementation Unit (PIU-NUC) which will be responsible for the day-to-day operations, including release of funds earned by the Universities (through verified DLIs) in line with the World Bank’s guidelines. The PIU-NUC will submit monthly reports to the Executive Secretary of NUC (as part of his overall oversight functions) and additional briefing during the bi-annual National Project Performance and Review meetings. The PIU-NUC will consist of a National Project Coordinator, Procurement Specialists, Financial Specialists, M&E Specialists, Internal Auditor, Communication Officers, Safeguards Specialists and other supporting staff. The PIU operational activities will be managed on a day-to-day basis by the PIU team. Nigeria and The Gambia also have the funding to support these entities in this regard.
6. **Africans in the diaspora will be heavily integrated into project implementation.** A significant number of the proposal evaluators for the project were academic researchers and administrators from the diaspora who currently work in reputable institutions outside Africa. Several international subject matter experts recruited to work alongside their local counterparts in providing implementation support are drawn from the diaspora. Under the ACE I Project, several center directors and other members of the center leadership teams have extensive and successful career experiences in Europe and North America, and many of the academic partnerships that the centers have secured involve members of the diaspora. The proposed Second ACE Impact Project will continue to reap the benefits of the diaspora through partnerships, visiting professorships, consultancies, and advisory bodies.

|  |
| --- |
| **B. Results Monitoring and Evaluation Arrangements** |

1. **The project will support systematic and continuous collection and analysis of performance data on agreed measures and indicators** to: (i) measure progress towards the achievement of the PDO, and (ii) ensure that project activities are implemented as planned, using the appropriate procedures. Importantly, disbursement to the ACE Impact centers will be linked to the achievement of DLRs. The RFU will oversee the overall M&E for the project, as well as ensure that a robust M&E database system is developed and institutionalized, and that all data are publicly available online. M&E will be carried out at both the center and regional levels of project implementation. Each center will undertake M&E functions utilizing existing administrative arrangements. The proposed Second ACE Impact Project will support strengthening of M&E capacity at both the center and at the RFU through TA and consultancies.
2. **M&E Mechanisms and Tools.** The design of the M&E arrangements under the Second ACE Impact Project reflects not only lessons learned from the ACE I Project, but also preliminary best practices demonstrated by the ACE II project.To measure progress of individual ACE Impact centers, and the overall project, a Results Framework and list of DLIs have been prepared (see Section VI). The project’s M&E tools include: The RF (indicators, baseline values, annual targets, and persons responsible for monitoring each indicator and timeline) and the M&E Plan. Additional review mechanisms of the centers’ RFs and their tracking tools will include the following: (a) institutional progress reports and internal quality and efficiency audit reports; (b) external verification of DLR achievements by an independent third party; (c) information regarding research publications and accreditations from internationally recognized bibliometric databases and the accreditation agencies themselves; and (d) interactions with stakeholders, including students. The results will be submitted online to avoid discrepancies and to ensure efficiency in the verification process. During the MTR of the project, the DLIs/DLRs and their allocation amounts, as well as any issues related to undisbursed funds, will be re-examined.
3. **Third-Party Verification** **and Disbursement**. Each center will prepare a report on progress made with respect to results and outcomes and submit it through an online portal (to be developed as part of the project) to the RFU. Based on these center level reports, the RFU will prepare bi-annual reports on implementation progress towards the achievement of DLIs and project outputs and outcomes. Achievement of the agreed DLRs for all the centers will be verified by certified Independent Third-party Verifiers (ITPV) who will provide, in a report, information on the actual amount per DLI that has been successfully verified. Drawing on the experience of implementing of the ACE I and II projects, the Second ACE Impact Project will use ITPVs that have already demonstrated their effectiveness. ITPVs will be selected competitively using World Bank competitive selection processes. The World Bank will review each ITPV report. Detailed results verification processes are included in the POM.
4. **Capacity building for data collection, monitoring and analysis.** Support will be provided to improve the availability, reliability, and timeliness of data. Such support is a critical consideration since disbursements will be linked to the agreed performance indicators. Capacity building for data collection, monitoring and analysis will be provided through the RFU. ACE I Project implementation confirmed that the data requirements and M&E capacity exist at the university level, but that this capacity will need to be improved. An assessment of M&E capacity will be undertaken and an action plan developed by the RFU. The action plan will detail interventions to mitigate M&E capacity shortfalls in the centers, particularly at the New centers under Sub-components 1.1 and 2.1. In addition, adequate on-the-job training will be provided to the centers’ M&E staff through the RFU, particularly in the first year of implementation. The capacity of the regional-level M&E staff based at the RFU, who will be responsible for aggregating the RF of the ACEs and providing insights on achievement, will also be reinforced as needed.
5. **Development of Peer-to-Peer Learning**. As supported under ACE I, the Second ACE Impact Project will continue to support M&E Peer-to-Peer learning in which well-performing M&E specialists from the ACE I Project selected to participate in the First and Second ACE Impact projects, will be requested to share good practices, and strategies for addressing challenges and bottlenecks with new M&E specialists. This peer-to-peer learning has been found to be highly effective and contributes to capacity development at the center level.

|  |
| --- |
| **C. Sustainability** |

1. **Ensuring sustainable financing for the centers will be an ongoing, long-term challenge.** Sustainability beyond the term of World Bank funding will require a long-term sustainability plan and revenue generation from, *inter alia,* student fees, institutional (and governmental) support, research grants and contracts, consulting fees, short-term courses, corporate partnerships and other sources. National governments participating in the Second ACE Impact Project have demonstrated their commitment to the project. However, this support must be continually leveraged to ensure that the standard of the laboratory facilities and equipment, faculty development, research expertise and funding, and curricula remain high at the centers even after World Bank funding ends.
2. **ACE centers typically receive funding over a relatively short four- to five-year period to enable them to build a large-scale academic program focused on high quality postgraduate education and applied research.** ACE I centers have been slow to develop sustainability plans and to achieve DLRs related to sustainability. The proposed Second ACE Impact Project addresses these concerns related to center sustainability through its integration and consideration at each stage of the project’s lifecycle and in various activities. The project has also prioritized sustainability in its engagement with global funding agencies and DPs to mobilize additional funds during the project lifetime, with the expectation that centers will build on this opportunity and continue to seek external research funding in the future. Workshops and webinars – including topics such as proposal writing, research management and commercialization of research results - will be a focus of the TA to each ACE Impact center.
3. **Institutional infrastructure developed through the Second ACE Impact Project will be sustainable during the medium-term and will lay the foundation for long-term benefits.** Physical infrastructure, including civil works, teaching and research facilities, and major laboratory equipment, will require ongoing investment to maintain standards. Moreover, the upgrading of faculty qualifications, and the expansion of academic programs and curricula will require continuous improvement in the teaching and research facilities beyond the lifetime of the project. These future investments will depend on the ability of participating centers, Colleges of Engineering and their host institutions to generate funds to support recurrent expenditure. As part of a long-term plan for sustainability, ACE Impact funding should serve as a catalyst and foundation for infrastructure to support the research and the teaching efforts of the centers into the future.
4. **The Second ACE Impact Project will incorporate a strong focus on institutional impact beyond the activities of the centers.** Under Components 1 and Sub-component 2.1, institutions will be required to implement actions based on best practices in higher education management to improve university leadership, management and operations. Investments in Institutional Impact – which may include developing a regional strategic plan for the institution and initiatives such as: a university small grants competition; an enhanced Sponsored-Research Office; a Technology Transfer Office or strengthened Institutional Development/fundraising activities – can support long-term sustainability not just in the centers but across the host universities. These policies and practices should be sustainable in the medium- and long-term and will provide a framework for continuous institutional improvement and sustainability.

|  |  |
| --- | --- |
| **IV. PROJECT APPRAISAL SUMMARY** | |
| **A. Technical, Economic and Financial Analysis** |

* + 1. **Technical Design**

1. **The technical design of the Second ACE Impact Project is based on globally recognized approaches for building higher education excellence,** including the following:
2. Competitive funding of higher education is the main vehicle in high performing systems for achieving specific education goals, such as increased graduate employability and the scaling-up of postgraduate education. The center selection and implementation processes incorporate lessons learned through oversight of global competitive funds in higher education, from science and engineering research funding programs in middle- and high-income countries and from the ongoing ACE I and ACE II projects. The competitive selection process also provides a platform for identifying visionary center leaders, who are innovative and have the capacity to lead the implementation of the centers beyond the life of the project.
3. The RBF approach which demonstrated results in the implementation of the ACE I Project, will be utilized in the proposed Second ACE Impact Project. This approach uses DLIs to incentivize centers to work towards results.
4. The project is expected to lay a foundation for improvements in governance in higher education, research groups and institutions. This will be key to achieving transformation and excellence in higher education.
5. The Second ACE Impact Project design is skewed towards STEM fields, that is, most of the centers are in STEM-related fields. The project will strengthen selected institutions to improve the quality of STEM programs and applied research and incorporate digital skills competencies (across disciplines) in their curricula which are key in supporting economic development.
6. The project design aims to support higher education institutions in the region to be competitive and marketable to the student population in the region.
7. **The project will proactively address climate change issues affecting the region**. As part of the climate and disaster risk screening of the project, it was identified that temperatures over West Africa have risen significantly over the past 20 years. In Nigeria, monthly high temperature averages now regularly range between 31-33° C. Floods, mostly due to a rise in sea-level, are a recurring natural hazard in Nigeria and have become more frequent throughout the country in the last couple of decades. Droughts negatively impact the socio-economic growth of Nigeria and are projected to become more severe in the future as a result of climate change. In Niger, the mean annual temperature increased by 0.6°–0.8°C between 1970 and 2010, slightly higher than the global average. In Niger, droughts are projected to increase in frequency in the coming century, which will have negative consequences on public health, food security, agricultural and pastoral activities, nutrition, and natural resources. In The Gambia, the mean annual temperatures have increased by 1.0°C since 1960, an average rate of 0.21°C per decade. All projections indicate substantial increases in the frequency of days and nights that are considered ‘hot’ in the current climate. These three countries selected are representative of the type of climate in the other two countries (Benin and Togo), which will participate in the Second ACE Impact Project.
8. **The substantial increase in the occurrence of these hazards in the region poses a significant risk to vulnerable populations and hence the need to mitigate these risks.** For example, particularly in rural regions where water is scarce due to drought, women and girls are negatively impacted the most as they tend to be tasked with the responsibility for finding water for their families. The proposed project will incorporate a two-pronged approach to addressing climate and disaster risks: (i) provide training and undertake applied research in climate change and related fields; and (ii) implement strategies during project implementation to mitigate the impact of climate hazards on the project and beyond.
9. **Currently, there is limited institutional capacity and systems in place in the countries participating in the project to identify and respond to disruptions from climate hazards.** In order to increase the resilience of these countries in the face of extreme events identified above, the relevant government line ministries will need to include risk reduction strategies for hazards and vulnerabilities into their future planning and concrete actions to be taken. However, there are limited numbers of experts trained in these fields in the region. Through the project, countries will be able to train and produce experts and the research required to develop identification, prevention, mitigation and adaptation strategies to reduce the countries’ vulnerability to extreme events and improve their ability to prevent and respond to these events. Several of the centers will train highly skilled graduates and mid-level professional workers and will undertake research in areas including water (irrigation, drylands), sanitation, urban design (sustainable cities), renewable energy and academic programs addressing environmental issues (in fields such as mining).
10. **Given that the project will support civil works for improving education and research facilities and purchase of equipment, there is the potential risk that these investments could be physically damaged in case these extreme climate hazards occur.** These risks will be reduced through the development of tailored guidelines for the construction of buildings and installation, and the maintenance of equipment that take into consideration the potential impact of natural hazards in each participating country. Thus, each center undertaking upgrade/construction of buildings such as laboratories, training centers, and students’ hostels will incorporate adaptation measures for safe and sustainable buildings in extreme temperature-, drought- and flood- prone areas. These measures in flood-prone areas may include drainage improvement, terracing for flood control to improve resilience, elevating equipment and investing in more water-resistant equipment and technologies. Further, the project will strengthen regional networks built around specialized research areas across the centers, support internet connectivity and the use of technology (ICT) in delivery of courses towards minimizing disruptions in the delivery of services (teaching and research), should climate events negatively affect any of the centers and interrupt the regular academic activities.
    * 1. **Economic and Financial Analysis**
11. **The economic and financial analysis provides the rationale for investing in higher education in SSA countries and estimates the economic internal rates of returns (IRR) to education.** The empirical results on the returns to higher education from the ACE I Project indicate that obtaining a higher education degree is associated with higher earnings[[15]](#footnote-16) (returns are 2.4 percent for Burkina Faso, 30 percent for Cameroon, 30 percent for Ghana, and 15 percent for Nigeria). The cost-benefit analysis (CBA) of the ACE 1 Component 1 demonstrates an IRR of approximately 3 percent in Burkina-Faso, 30 percent in Cameroon, 28 percent in Ghana, and 15 percent in Nigeria. Due to lack of detailed data, the returns were not calculated by specific targeted professions funded in this project, such as engineering and medicine, where surveys indicate high private sector demand and low unemployment. In Burkina Faso, as elsewhere, the calculated average returns therefore represent national averages, and include humanities and social science disciplines that are in low demand on the West African labor market. Globally, private returns to higher education (14.6 percent) are higher than the returns to primary education (11.5 percent). The average rate of private returns to higher education in SSA is 21 percent; higher than any other region due to the much lower percentage of higher education graduates in the general population in SSA. Returns to higher education in the region are on average 29.7 percent (2011) in Niger, 21.8 percent in Senegal (2011), and 28.7 percent (2012) in Ghana.
12. **The high returns on investment in higher education on specific regional skills shortages will support the SSA growth and competitiveness.** Despite investments in higher education, returns achieved in SSA are not sufficient. In addition, the quality of the education delivered in SSA countries tends to be lower than countries in other regions. For instance, available data shows that countries such as Benin, Burundi and Sierra Leone where government expenditure on tertiary education as a percentage of GDP ranges between 1.2 to 1.6 percent, have scores between 2.9 and 3.3 for the aspect “quality of tertiary education” of the Global Competitiveness Index[[16]](#footnote-17); while other countries like Albania, Tajikistan and Nepal have scores higher than 3.8 with lower investment ranging between 0.39 to 0.78 percent of GDP. Each country faces several challenges making it difficult to afford the interventions needed to ensure that their higher education systems can compete internationally. Furthermore, studies show that: a one percent increase in the stock of higher education (the number of people having completed higher education) leads to a 0.35 percent increase in industrial production, and that a one percent increase in the number of engineering or natural sciences graduates leads to a 0.15 percent increase in agricultural production[[17]](#footnote-18). In addition, a one-year increase in average higher education levels would raise annual GDP growth in Africa by 0.39 percentage points, and eventually yield up to a 12 percent increase in GDP. The private rate of return to another year of schooling in higher education is 15.2 percent for men and 16.8 percent for women. Returns to higher education across the region are, on average, higher for women than for men.
13. **A CBA undertaken in the context of project preparation shows that the proposed project is economically viable** for both IRRs and the Net Present Values (NPVs) of costs and benefits for combined estimates of the quantifiable Components for the project. For an estimated present discounted value of benefits for the overall project of US$229.7 million, the corresponding NPV of program benefits is US$35.88 million. The IRR associated with this NPV is 24.7 percent. Overall, the cost-benefit ratio implies that for every US$1 invested the return is US$1.2 Therefore, although data to measure all likely benefits are not available and given the high opportunity costs for project participants, the NPV from the quantifiable benefits outweigh the NPV of costs, and the results support investment in the project. Moreover, the cost of an ACE center represents a small portion of government expenditure on higher education. The Second ACE Impact Project will be implemented over the course of four and a half years, with each center being awarded an average of US$4 to US$6 million within that period. If one assumes that in a year a center of excellence will receive between US$0.8 to 1.2million, each ACE only represents 0.91 and 1.37 percent of the Government of Benin’s annual public expenditure on higher education, 0.67 to 1.01 in Burkina Faso, 0.22 to 0.33 percent in Côte d’Ivoire, and 0.14 to 0.21 percent in Ghana (see Annex 7 for further details on the economic analysis).
14. **Public financing is necessary due to absence of private financing for STEM and post-graduate studies and substantial spillover effects.** For example, in Nigeria, less than 1 in 20 post-graduate students are enrolled in self-financed studies, and most of those studies are in business management or accounting. Further, very few non-government institutions invest in post-graduate studies and research due to the low private returns and lack of public funding to these activities. However, post-graduate education in thematic areas of high relevance to development can have high economy-wide returns through economic spill-overs on: (i) adoption of new technology which benefit co-workers and users, such as new tablet apps; (ii) quality of policy making from applied and communicated research, for example within climate change or water usage; (iii) quality of higher education through higher quality and relevance of teaching staff with post-graduate studies; and (iv) diffusion of new labs, products and processes, such as rapid in-country diagnosing of infectious disease or new drought-resistant crops.

|  |
| --- |
| **B. Fiduciary** |

* + 1. **Financial Management (FM)**

1. **At the national level, each selected higher education institution will implement its own ACE Impact sub-project.** Each Second ACE Impact host institution will house an ACE Impact implementation team that will manage both the technical and the fiduciary aspects of its own sub-project. At the regional level, the AAU, in its role as the RFU, will receive a grant to support overall project facilitation as indicated under Component 3 of the proposed project, supporting the centers under Components 1 and Sub-component 2.1. AAU will be responsible for all fiduciary aspects associated with the use of the grant it will receive. In addition, under Component 3, NUC (Nigeria) and the PCU-Gambia will also receive funding for national level coordination of the centers within their respective countries.

**Brief highlights from FM assessments of centers and risk mitigating steps**

1. In line with the guidelines as stated in the Financial Management Practices Manual issued by the Financial Management Sector Board on March 1, 2010, a FM assessment –was conducted within the AAU (under the First ACE Impact), NUC, PCU-Gambia and each participating University (hosting a center) to support the implementation of the project. Centers and their implementing teams at the following 19 participating Universities were assessed: **Benin**: University of Abomey Calavi *(Université d’Abomey Calavi, UAC)*; **Niger**: Abdou Moumouni University *(Université Abdou Moumouni,* UAM) and School of Mines, Industry and Geology (*l’Ecole des Mines, de l’Industrie et de la Géologie,* EMIG); **The Gambia**: *Gambia Technical Training Institute* (GTTI); and **Togo**: *University of Lomé* (*Université de Lomé,* UL); and **Nigeria**: *Redeemer's University* (RU), *Ahmadu Bello University* (ABU), *University of Benin,* Nigeria (UniBen), *Bayero University, Kano* (BUK), *Benue State University, Nigeria* (BSU), *Obafemi Awolowo University* (OAU), *University of Port Harcourt, Nigeria* (UniPort), *Covenant University* (CU), *National Open University of Nigeria* (NOUN), *Lagos State University* (LSU), *Federal University of Technology, Minna, Nigeria* (FUTMIN), *University of Lagos Nigeria* (UniLag), *University of Nigeria-Nsukka* (UNN), and *Federal University of Technology, Owerri, Nigeria* (FUTO).
2. **The objective of the assessments is to determine whether these entities have adequate FM arrangements in place (including planning and budgeting, accounting, internal control, funds flow, financial reporting and auditing).** The FM arrangements are acceptable if the centers are considered capable of: (a) correctly recording all budgets, transactions and balances; (b) supporting the preparation of regular and reliable financial statements; (c) safeguarding the entity’s assets; and (d) reflecting auditing arrangements acceptable to the World Bank. In this regard, a review of the FM arrangements has been completed for all the implementing entities and is briefly summarized below. The detailed summary of the completed FM assessments and suggested measures to address identified inadequacies and risks are described in Annex 2. The FM Action Plan on proposed mitigation measures is in Annex 2, Table A2.3.
3. **Overall the assessed FM risk for the project concludes that most of the ACEs have FM systems that can be relied upon to support implementation, albeit with varying degrees of adequacy and effectiveness.** In addition, based on the design of the project and its inherent factors such as (i) the inclusion of New centers that have no experience in managing IDA funds, the adopting of Results Based Financing (DLI/DLR) as an instrument, systemic weaknesses in some centers regarding fiduciary oversight and possible challenges with multiple in-country coordination of fiduciary matters, the overall project FM risk is rated as Substantial.
4. **EEPs will consist of salaries, scholarships and the operating costs of each university hosting center.** The World Bank Guidance Notes on IPFs with DLIs dated April 2018, World Bank policy and procedures for IPFs, including procurement, FM, safeguards policies and anti-corruption guidelines apply to this project. Based on experience implementing the ACE I Project, the Second ACE Impact centers’ budgeted expenditures will consist of salaries for faculty, technical and administrative staff, scholarships, travel (accommodation, transportation, per diem), training costs, conference fees, non-procurable costs for workshops and seminars, communication, marketing, and operating costs, and funds from the government/host institutions to support investment proportions in learning equipment, civil works, consultant fees and other goods (vehicles, reagent, etc.). Since the EEPs under the proposed project are considered as non-procurable items, the World Bank’s Procurement Regulations will not apply. Upon achievement and verification of DLRs, the World Bank will disburse funds to each center against its EEPs, as evidenced in its semiannual IFRs. The definition of EEPs is included in the POM. Remaining non-EEP related expenditure, although funded by the respective institutions/governments will still be accounted for and monitored under the project.
5. **The allocated amounts for the DLIs will vary from center to center but in all cases will be less than the amount of the EEPs**. The eligible expenditure amount, as ascertained in the EEP Statement, will form part of the IFR submitted for disbursement, and exceed the DLR allocated amount. EEPs will be audited as part of each ACE Impact center’s annual financial statement audit.

**(ii) Procurement**

1. **For all Implementing Agencies, procurement under the proposed project will be carried out in accordance with the following World Bank procedures:** (a) [the World Bank Procurement Regulations (PR) for IPF Borrowers](https://policies.worldbank.org/sites/ppf3/PPFDocuments/Forms/DispPage.aspx?docid=4005&ver=current), dated July 2016 and revised in November 2017, and August 2018; (b) “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 as of July 1, 2016 and other provisions stipulated in the Financing Agreements (FAs); and (c) World Bank Guidance on IPF with Disbursement-Linked Indicators, dated April 25, 2018: “The World Bank’s procurement rules apply to all contracts financed wholly or in part by the World Bank. When procurable items are organized as a budget line, the World Bank’s rules apply to the entire budget line, not merely that part financed by the World Bank. For contracts below international market thresholds, the World Bank may agree to use Recipient’s procedures; it may also, in exceptional cases, agree to the use of other procurement arrangements, including the Borrower’s, for international bidding, provided they are consistent with World Bank core procurement principles and meet other policy requirements, including governance standards. For contracts not financed by the World Bank, but within the scope of a World Bank-financed project, the Recipient may use other procedures if the World Bank is satisfied that they ensure that the goods, works, non-consulting services or consulting services procured are of a satisfactory quality, compatible with the other elements of the project, consistent with the project objectives, delivered or completed in a timely manner, and are priced so as not to have an adverse effect on the economic and financial viability of the project.”
2. **Each Component of the project will have its own procurement arrangements**. Procurement activities under Component 1 and Sub-component 2.1 will be implemented by the selected education institutions in the Borrower countries, and the World Bank funds will be disbursed against a set of DLIs to finance the non-procurable expenditures as defined under the EEPs. Other expenditures, the non-EEPs, including procurement of goods and civil works under the project will be procured together with the institutions’ other operating requirements and needs, following the institutions’ own procurement procedures. These non-EEPs will be financed by the institutions’/governments’ own funds and therefore, the procurement plans for those activities will not be prepared in STEP nor will they be reviewed and cleared by the World Bank. If any such procurable expenditures are at any point to be included for World Bank financing, the center and its host institution shall be required to follow the PR as stated in World Bank Guidance on IPF with DLI (dated April 25, 2018) Section III and Annex 2 for the entire budget line of each of such procurable expenditures. The procurement plans for such procurement activities will be prepared, reviewed and cleared in STEP, as well as any prior review procurement.
3. Contributions towards Sub-component 2.2 will be disbursed semi-annually directly upon project effectiveness to *icipe,* the RFU for the World Bank-financed RSIF project. Component 3 under the Second ACE Impact Project will finance inputs-based expenditures for facilitation, coordination and study activities by AAU, NUC and the PCU-Gambia, and these institutions will follow the World Bank’s Procurement Regulations and use the World Bank’s e-Systematic Tracking of Exchanges in Procurement (STEP) when implementing the activities under the project.
4. **Consistent with the above procurement arrangements, the Project Procurement Strategy Document (PPSD), based upon procurement assessments and the procurement plans of the Component 3 agencies, includes the AAU, Nigeria and The Gambia**. The countries’ context in terms of bureaucracy, economic condition, currency stability, financial constraints, technology, and inadequate national market for high value and complex procurements, identified minor safeguards issues, coupled with the countries’ economic, procurement, and safeguards policies will impact the approach and response to the market and the execution of contracts. Under the Second ACE Impact Project, the capacities of the AAU, NUC and the PCU-Gambia and other identified procurement risks will impact the procurement implementation. Thus, timely and adequate execution of the mitigations will help improve procurement implementation under the project. The studies and analysis show that there are opportunities for both national and international firms under the project in each of the countries. In addition, the World Bank is carrying out a limited procurement assessment of a select number of the Second ACE Impact centers (in Niger, Nigeria, Togo, Benin and The Gambia). The limited assessment is focusing on select centers hosted in universities that did not participate in the ACE I Project and so are not familiar with the program. The full summary of the completed procurement assessments and suggested measures to address identified inadequacies and risks are provided in Annex 2. A brief summary is given below:
5. **Each center, AAU, the PCU-Gambia**, **and the NUC will have in place adequate capacity to ensure the timely implementation of procurement activities**. AAU will have the responsibility for procurement activities under the regional level activities (under Component 3) they will support and in accordance with the PR and using STEP for procurement planning and prior reviews. AAU will also engage a well-qualified and experienced procurement consultant proficient in World Bank procurement requirements and procedures, to undertake procurement at AAU. The procurement consultant will more importantly act as an advisor to the First and Second ACE Impact centers, supporting them in procurement-related activities. The limited assessment indicated a lack of staff that are solely dedicated to the centers’ project procurement activities. The universities will delegate a dedicated procurement staff from its existing staff or hire one to handle procurement activities for the centers.
6. **Since the centers will utilize their own institutions’/national procurement guidelines, the government will be the primary entity responsible for oversight with limited strategic oversight by the World Bank’s procurement team**. Given the peculiarities associated with procurement of science equipment and research supplies, centers may propose separate guidelines that are specific for procurement of science goods and allow the centers to be efficient in implementing their projects on schedule. Such additional guidelines will be consistent with the general principles of procurement, included in the Procurement Manuals of the centers and subject to approval by the World Bank procurement specialist in the country. To ensure compliance by the centers and to monitor their procurement activities, the NSCs will review the procurement audits of the centers within their respective countries at least once a year. Overall, the procurement risk rating for the project is Substantial due to the low procurement capacity of the staff at the centers. It is, however, important to note that the procurement within the project that will use World Bank procurement system (that is, procurement by AAU, the PCU-Gambia, and the NUC) is light and all their procurement packages are expected to be simple and of low cost.

|  |
| --- |
| **C. Safeguards** |

1. **Environmental Safeguards**
2. **Environmental Assessment category: The project is classified as Category B in accordance with the World Bank’s Operational Safeguards Policies.** This rating is based on the scope of the project, which indicates adverse environmental and social impacts are expected to be limited and mostly site-specific due to the nature of the civil works activities. The civil works within the project will mainly consist of construction of new buildings or other facilities within the current boundaries of university campuses of the selected centers; or extensions of current buildings and facilities; or rehabilitation of old buildings and facilities, including repair of buildings that do not meet current building standards. In addition to encouraging investment in knowledge and skills in priority areas pertinent to the region’s development, the project activities will have positive impacts in terms of promoting awareness among all national stakeholders about the environmental and social issues of project activities, respect for the environment and the key principles of sustainable development. The potential negative environmental impacts associated with soil and water pollution, liquid and solid waste, occupational health and safety and community safety are expected to be moderate and limited in time and space. All non-hazardous and hazardous wastes from the laboratories associated with the project will be dealt with appropriately according to the candidate institution’s Environmental and Social Impact Assessment (ESIA) or Environmental and Social Management Plan (ESMP). Appropriate mitigation measures will be defined for managing these negative impacts that may occur during project implementation. These measures will be clearly defined when assessments are conducted while developing the ESIAs/ESMPs.
3. **Safeguards policies triggered: The project has triggered two safeguards policies:** **Environmental Assessment OP/BP 4.01 and Physical Cultural Resources (OP/BP4.11**). There are likely to be limited adverse environmental and social impacts during project implementation. In fulfillment of the World Bank’s safeguards policies,each of the five countries has prepared an Environmental and Social Management Framework (ESMF), according to the National and World Bank policies, which defines the key steps to be taken for each site-specific physical investment. All the ESMFs have been consulted upon, validated and disclosed in-country and by the World Bank during appraisal.[[18]](#footnote-19) The selection of the participating institutions (under both Component 1 and Sub-component 2.1) has been completed. To manage environmental and social impacts (including impacts from civil works waste, etc. resulting from day-to-day operations of the centers), once the specific locations of project activities within the selected institutions are known, an ESIA or ESMP will be prepared, consulted upon, reviewed, approved and disclosed in-country and at the World Bank website before commencement of any eligible activities. These safeguards documents will be prepared for each eligible investment. Each center will identify a safeguards officer who will be responsible for ensuring the center meets all of its safeguards requirements. The RFU (AAU) will hire a consultant who will support the centers in developing these safeguards tools.
4. **Regarding the triggering of Physical Cultural Resources (OP 4.11) and particularly chance finds, the project may carry out activities in areas of cultural significance and heritage that could impact and/or lead to the discovery of antiquities and other physical cultural resources.** As part of the proposed Second ACE Impact Project, this will also concern buildings of historical value and which would be the subject of rehabilitation works. To mitigate these risks, contracts for civil works involving excavations will incorporate procedures for dealing with situations in which buried physical cultural resources are unexpectedly encountered. As a precautionary measure, the chance finds procedures guidance note has been included as an annex to the ESMF and subsequent ESIAs/ESMPs, as required.
5. **Social Safeguards**
6. **The project does not trigger any of the social safeguards policies**. The project expects to support only minor construction and rehabilitation works that will take place within existing university campuses. The project will not finance any sub-projects resulting in the involuntary acquisition of land, loss of physical and economic assets, and/or loss of livelihoods. Mitigation measures for any social impact that may arise because of the minor rehabilitation are detailed in the ESMFs and subsequent ESIAs/ESMPs. Other social issues, including guidelines to ensure that sub-projects promote positive social outcomes, are detailed in the POM.
7. **Gender-based risks associated with the project include public harassment, including verbal insults, sexual harassment and physical abuse of female students**. The project will require supported centers to make public their policy to counter student and staff abuse, including sexual harassment. Targeted support to women under the project may exacerbate these risks as young women acquire skills that give them access to impoved livelihoods; become more empowered to progress in traditionally male-dominated fields; and are perceived to take independent decisions, including the perception of neglect of their domestic responsibilities. To this end, the project will mitigate the risk of Gender-Based Violence (GBV)/Sexual Exploitation & Abuse (SEA) by requiring that each center has and complies with its sexual harassment policies through the following actions: (a) As part of DLI 1, each center will submit its sexual harassment policy and make it accessible online to its students and staff; (b) Each center will report to the PSC (government, AFD and the World Bank), by submitting a report semi-annually to AAU on any related complaints and how it adequately resolved or is resolving the complaint; and (c) Each center will have available resources and/or information that survivors of GBV/SEA can be referred to either within the university or an external agency with expertise and mandate to handle such cases.
8. **Recruiting and retaining women in the Second ACE Impact academic programs (particularly at the PhD level) is a priority of the project.** For example, for several of the intermediate results indicators (especially those that track numbers of students or faculty), the data will be dissagregated by gender in order to help track the project’s impact on female representation in participating higher education institutions. Also, in each annual workplan of all participating centers and the CoEngg, centers will be required to indicate activities and interventions towards increasing and retaining women.
9. **Grievance Redress Mechanisms**
10. **Grievance Redress and Feedback Mechanisms and Beneficiary/Citizen Engagement, notably student engagement, are vital to the project’s success.** The ACE I Project demonstrated the importance of student feedback to promote academic excellence. Under the Second ACE Impact Project, student feedback will be received through an online complaint submission system (to be managed by the RFU), regular independent student surveys and during regular supervision meetings with student groups. The latter two mechanisms served as feedback and complaint mechanisms in the ACE I Project and provided: (a) information about project implementation; (b) an opportunity for resolving grievances and disputes at the lowest level; (c) fora for resolving disputes relatively quickly before they escalated to an unmanageable level; (d) a platform for facilitating effective communication between the project, centers, and affected persons (most often students); and (e) an opportunity for winning the trust and confidence of project beneficiaries and stakeholders which created productive relationships between the parties. The student survey and on-site regular meetings with students, faculty, and other stakeholders will be further strengthened under the Second ACE Impact Project. In addition, as part of preparation, a student focus group with participation of students from nine countries was convened. Further, representatives of civil society, including firms and other non-governmental entities, will form part of the sector advisory committees for each center to guide the center’s activities and ensure that education and research activities meet development needs.
11. **Grievance Redress Service**
12. 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/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the World Bank Inspection Panel, please visit [www.inspectionpanel.org](http://www.inspectionpanel.org/).

|  |
| --- |
| **V. KEY RISKS** |

**Overall Risk Rating and Explanation of Key Risks**

1. **The overall risk of this project is moderate**. Based on lessons learned through implementation of the ACE I and II projects, the proposed Second ACE Impact Project faces several challenges, particularly in selecting the centers that will have: the most impact, strong academia-business collaboration, and sustainability; strong government and university leadership and ownership; full buy-in from other university departments other than the primary departments; and the adequate flow of funds to centers and strong utilization rates. Below are details of the important risks identified and mitigation measures:
2. ***Political and governance (Substantial):*** Experience accrued through the ACE I Project indicates that strong support from the government and ACE host institution management contribute substantially to the success of the ACE center. However, negative interference from governments and ACE host institution management have been known to hamper the progress of a few ACE centers. Negative interference may take the form of government appointment of leaders within the centers using non-merit-based processes, vice chancellors’ decisions to block flow of funds to the centers, or university management using the center’s funds for non-ACE purposes. These risks will be mitigated through: the evaluation of government and university leadership during the selection process; early identification of these issues during implementation; sharing with the centers and university management both good and bad examples from the ACE I and II projects; providing funds to ACE host institutions through the DLIs (DLI 7). A second political risk is student and/or faculty strikes. Strikes not related to the project could still affect Center education activities and delay student graduation and implementation. The project will reduce the risk through consultations with students and faculty as well as investments to raise the quality of education and attention to student progression and welfare.
3. ***Institutional capacity for implementation and sustainability (Substantial):*** Implementation was delayed during the ACE I Project due to low capacity in a few centers, including the capacity for the operationalization of the RBF approach. With the increase in number of centers, scaling-up the robust implementation support detailed under Annex 4 and described for the ACE I Project will help mitigate this risk of low implementation capacity. In addition, the implementation monitoring (beyond the World Bank regional task team’s role) will be streamlined into each CMU’s overall portfolio monitoring arrangements in place for its national projects. Some ACE I centers struggle to generate external revenue, with negative implications for sustainability. Targeted training for centers and a stronger focus in supporting centers in establishing industry partnerships early in the preparation of their proposals will help mitigate this risk. Moreover, each center will be required to develop a sustainability plan which will be regularly monitored.
4. ***Fiduciary (Substantial):*** Due to the inefficient procurement practices in place at some of the universities, procurement can be slow during implementation. Both FM and procurement capacity assessments were carried out during project preparation. During implementation, the team will explore interventions to remove bottlenecks and minimize their effects on the project, based on the findings of the FM and procurement capacity assessments.
5. ***Counterpart Funding (Moderate)***: An estimated 45 percent of total funding will be derived from counterpart funding in the form of existing salary payments from governments to the selected universities. This funding is already budgeted, and not additional budget required for the project. Therefore, the risk of delayed counterpart funding is low. There was no problem with delayed faculty salaries in ACE I. Delays in salary payments would adversely affect the functioning of the ACEs.
6. ***Co- and/or Parallel Financing (Moderate*):** Co-financing from AFD and, potentially, parallel financing from other partners, although promoted within the project, comes with its own risks. The risk of delayed or no funding from partners, increased transactional costs for centers and the World Bank task team (due to partners’ own requirements). To mitigate the risks, (a) the team is for example, working closely with AFD to use the ACE model and inter alia use similar documentation, verifiers and subject matter experts. This is the approach discussed with the different potential partners; (b) the team is in close dialogue with AFD concerning the status of the co-financing credits, the timelines, probability of these credits materializing and options for consideration on how the World Bank may step in should the funds be delayed, for example; and (c) The FAs for Benin and Nigeria have a remedy which indicates that the Co-financing Deadline for the effectiveness of the Co-financing Agreement between the Nigeria government and AFD is eighteen (18) months from the FA Effective Date.
7. ***Reputational Risk (Moderate):*** AFD is solely funding the Côte d’Ivoire complementary project. The World Bank’s role will consist of providing grant financing to AAU (the RFU), to enable it (rather than the World Bank) to provide supervisory services to AFD. These services would include, inter alia: verification of DLIs; implementation support to centers; capacity building activities; support to ensure Côte d’Ivoire’s participation in regional PSC meetings and technical workshops; etc. However, AFD will be responsible for all fiduciary (including FM, procurement, safeguards) aspects of the Côte d’Ivoire project. Although the World Bank is not responsible for the fiduciary aspects of this project, it may not be possible for the World Bank to completely insulate itself from potential reputational risks related to the Côte d’Ivoire project during implementation, because of the strong linkages between the proposed Second ACE Impact Project and the complementary project in Côte d’Ivoire, specifically AAU’s role.

.

|  |
| --- |
| **VI. RESULTS FRAMEWORK AND MONITORING** |

|  |
| --- |
| **Results Framework** |
| **COUNTRY: Western Africa  Second Africa Higher Education Centers of Excellence for Development Impact** |

|  |
| --- |
| **Project Development Objectives(s)** |
| To improve quality, quantity and development impact of postgraduate education in selected universities through regional specialization and collaboration. |

|  |
| --- |
| **Project Development Objective Indicators** |

| **RESULT\_FRAME\_TBL\_PDO** |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Indicator Name** | **DLI** | **Baseline** | **Intermediate Targets** | **End Target** |
|  |  |  | **1** |  |
| **To improve quality, quantity and development impact of postgraduate education in selected univs.** | | | | |
| Number of students (National and Regional) enrolled in specialized master’s, PhD and short-term professional courses/programs in the ACEs (Number) (Number) |  | 6,485.00 | 12,380.00 | 21,185.00 |
| Number of PhD students enrolled in specialized programs at ACEs (Number) |  | 428.00 | 1,003.00 | 1,828.00 |
| Number of master's students enrolled in specialized programs at ACEs (Number) |  | 1,691.00 | 3,651.00 | 6,591.00 |
| Number of Regional students enrolled in specialized programs at ACEs (Number) |  | 2,300.00 | 3,980.00 | 6,500.00 |
| Number of female students enrolled in specialized programs at ACEs (Number) |  | 2,307.00 | 4,267.00 | 7,207.00 |
| Number students enrolled in professional short courses at ACEs (Number) |  | 4,366.00 | 7,726.00 | 12,766.00 |
| Number of ACE programs and ACE host institutions that obtain international accreditation (Number) |  | 5.00 | 25.00 | 56.00 |
| Number of ACE programs that obtain international accreditation (Number) |  | 5.00 | 25.00 | 52.00 |
| Number of ACE host Institutions that obtain international accreditation (Number) |  | 0.00 | 1.00 | 2.00 |
| Share of ACE host institutions with a comprehensive strategic plan for regionalization (Percentage) |  | 0.00 | 30.00 | 75.00 |
| Number of ACEs that have had substantial development impact (Number) |  | 0.00 | 6.00 | 14.00 |
| Number of students and faculty participating in internships in relevant institutions (Number) |  | 1,186.00 | 2,306.00 | 3,986.00 |

|  |
| --- |
| **PDO Table SPACE** |

|  |
| --- |
| **Intermediate Results Indicators by Components** |

| **RESULT\_FRAME\_TBL\_IO** |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Indicator Name** | **DLI** | **Baseline** | **Intermediate Targets** | **End Target** |
|  |  |  | **1** |  |
| **Establishing New and Scaling up Well-performing Africa Centers of Excellence for Development Impact** | | | | |
| Number of female center directors or deputy directors (Number) |  | 0.00 | 3.00 | 4.00 |
| Number of ACE related research publications in internationally recognized peer reviewed journals (Number) |  | 394.00 | 950.00 | 1,794.00 |
| Number of new nationally or regionally accredited programs (master's and PhDs) (Number) |  | 0.00 | 23.00 | 56.00 |
| Amount in externally generated revenue by the ACEs (Amount(USD)) |  | 16,849,580.00 | 30,738,469.00 | 51,849,580.00 |
| Share of master’s and PhD graduates employed within 6 months of graduation (Percentage) |  | 0.00 | 70.00 | 80.00 |
| Number of host institutions of ACEs participating in the regional benchmarking initiative (Number) |  | 0.00 | 11.00 | 14.00 |
| **Component 2 - Fostering Regional Partnerships and Scholarships** | | | | |
| Number of new master’s and undergraduate students enrolled in programs at the emerging centers (Number) |  | 0.00 | 120.00 | 300.00 |
| Number of new nationally or regionally accredited programs (master’s and undergraduate) at the emerging centers (Number) |  | 0.00 | 5.00 | 12.00 |
| Number of faculty and students participating in academic exchanges within the region from and to the emerging centers (Number) |  | 0.00 | 42.00 | 105.00 |
| Share of undergraduate and master’s graduates of emerging centers employed within 6 months of graduating (Percentage) |  | 0.00 | 60.00 | 70.00 |
| Number of well-functioning regional networks established by the project (Number) |  | 0.00 | 6.00 | 9.00 |
| Number of host institutions of emerging centers participating in the regional benchmarking initiative (Number) |  | 0.00 | 2.00 | 3.00 |
| Number of newly enrolled RSIF PhD students supported through the ACE Impact governments' contributions (Number) |  | 0.00 | 38.00 | 90.00 |
| **Component 3 - Enhancing National and Regional Level Project Facilitation and M&E** | | | | |
| Number of Project Beneficiaries (Number) |  | 0.00 | 8,000.00 | 19,000.00 |
| Level of satisfaction of the Second ACE Impact students (Citizen Engagement indicator and part of Grievance Redress Mechanism) (Number) |  | 3.60 | 3.80 | 4.00 |
| Level of satisfaction of the ACEs and Steering Committee on the support given by the RFU (Citizen Engagement indicator and part of the Grievance Redress Mechanism) (Number) |  | 4.00 | 4.10 | 4.20 |
| Level of satisfaction of ACEs with the support from the National Governments (Citizen engagement and part of the Griveance Mechanism) (Number) |  | 3.80 | 3.90 | 4.00 |

|  |
| --- |
| **IO Table SPACE** |

|  |
| --- |
| **UL Table SPACE** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Monitoring & Evaluation Plan: PDO Indicators** | | | | | |
| **Indicator Name** | **Definition/Description** | **Frequency** | **Datasource** | **Methodology for Data Collection** | **Responsibility for Data Collection** |
| Number of students (National and Regional) enrolled in specialized master’s, PhD and short-term professional courses/programs in the ACEs (Number) | This indicator measures the new number of African students (both national and regional students) and those that are enrolled in (i) master’s programs (ii) PhD programs who have successfully completed at least one semester/term at the ACEs and (iii) professional short courses. The term “Regional students” within this framework refers to students studying at the ACEs from SSA countries outside of their ACE host country. ACEs can only count each student once during their entire enrollment at the center. PhD and master’s students cannot be counted as professional short-term students even if they enroll in these courses. Exchange students will count as long as they are enrolled full time for at least a semester. This indicator as shown in subsequent indicators below will also be disaggregated by gender. | Biannually | ACE enrolment records with information such as names, contact information, program of study, year in program, nationality, etc. | Aggregation of number of students obtained from program/course registrations and submitted to the RFU through the Second ACE Impact project online data submission portal. | ACEs and RFU |
| Number of PhD students enrolled in specialized programs at ACEs | This indicator measures the number of new students who are enrolled in PhD programs and who have successfully completed at least one semester/term at the ACEs (see parent indicator above) | Biannually | ACE enrolment records | Aggregation of number of regional PhD students obtained from program/course registrations and submitted to the RFU through the Second ACE Impact project online data submission portal | ACEs and RFU |
| Number of master's students enrolled in specialized programs at ACEs | This indicator measures the number of new students who are enrolled in master’s programs and who have successfully completed at least one semester/term at the ACEs (see parent indicator above) | Biannually | ACE enrolment records | Aggregation of number of master’s students obtained from program/course registrations and submitted to the RFU through the Second ACE Impact project online data submission portal | ACEs and RFU |
| Number of Regional students enrolled in specialized programs at ACEs | This indicator measures the number of new regional students who are enrolled in the specialized programs and who have successfully completed at least one semester at the ACEs (see parent indicator above). | Biannually | ACE enrolment records. | Aggregation of number of regional students obtained from program registrations and submitted to the RFU through the Second ACE Impact project online data submission portal. | ACEs and RFU |
| Number of female students enrolled in specialized programs at ACEs | This indicator measures the number of new female students who are enrolled in specialized programs and who have successfully completed at least one semester/term at the ACEs (see parent indicator above). | Biannually | ACE enrolment records | Aggregation of number of female PhD students obtained from program/course registrations and submitted to the RFU through the Second ACE Impact project online data submission portal. | ACEs and RFU |
| Number students enrolled in professional short courses at ACEs | This indicator measures the number of new students who enroll in and complete professional short courses offered at the ACEs. | Biannually | ACE enrolment records | Student course registrations and signatures submitted to the RFU through the Second ACE Impact project online data submission portal. | ACEs and RFU |
| Number of ACE programs and ACE host institutions that obtain international accreditation | This indicator measures the quality of the master’s and PhD programs offered by the ACEs as well as the quality of the overall ACE host institution. The data collected under this indicator should indicate the specific program/level of the international accreditation and the accreditation agency used. The accreditation agency selected by the ACEs should be internationally recognized in its capacity and should be an agency satisfactory to the RFU and the World Bank. The accreditation agency will use its own standard methodology for assessing the ACEs and ACE host institutions. | Biannually | ACEs' and their host institutions’ records of certificates and reports issued by the accreditation agencies. | ACEs submit certificates and reports to the online data submission portal as part of progress reporting | ACEs and RFU |
| Number of ACE programs that obtain international accreditation | This indicator measures the quality of the master’s and PhD programs accredited internationally by an agency satisfactory to the RFU and the World Bank. (see parent indicator above for more details). | Biannually | ACEs' and their host institutions’ records of certificates and reports issued by the accreditation agencies. | ACEs submit certificates and reports to the online data submission portal as part of progress reporting. | ACEs and RFU |
| Number of ACE host Institutions that obtain international accreditation | This indicator measures the quality of the academic programs through international accreditation by an agency satisfactory to the RFU and the World Bank. (see parent indicator above for more details). | Biannually | ACEs' and their host institutions’ records of certificates and reports issued by the accreditation agencies. | ACEs submit certificates and reports to the online data submission portal as part of progress reporting. | ACEs and RFU |
| Share of ACE host institutions with a comprehensive strategic plan for regionalization | This indicator provides the percentage of ACE host institutions that have put in place new or have revamped their strategic plans for regionalization in an effort to attract more regional students and partners to their ACE center. The strategic plan should include elements to strengthen the sustainability of the centers and to also ensure there is support to core activities of the institutions beyond the lifetime of the project, | Once (for each participating ACE host institution) | Evaluation reports indicating the approval of the regional strategic plan submitted by the individual participating ACE host institutions. | Aggregation of the number of approved plans submitted in the Second ACE Impact online data submission portal | ACEs, ACE host institutions and RFU |
| Number of ACEs that have had substantial development impact | This indicator measures the development impact that the ACEs are having both nationally and regionally in terms of the extent of their contribution to their sector/industries. The indicator assesses the quality of the postgraduate graduates and the applied research of the ACEs. Impact reported will be on a 1-5 scale with evaluation criteria including: number of student internships; number of graduates hired in the sector; number of short courses delivered in response to sectoral stakeholder requests; evaluation of Sectoral Advisory Board annual reports and interviews with sectoral stakeholders | Twice (at year 3 (year 2 for renewals) and year 4) | Evaluation report per ACE, developed from assessing the ACEs progress reports; interviews and surveys of relevant stakeholders | Aggregation of number of ACEs with evaluation scores greater than 3.5 (on the 1-5 scale) | ACEs and RFU |
| Number of students and faculty participating in internships in relevant institutions | This indicator measures the number of students and faculty participating in internships in relevant institutions. This data will be disaggregated into: (i) students versus faculty; (ii) gender and (iii) thematic groupings of fields of study/research. Each ACE will establish a tracking mechanism and database to record information on all of its students and faculty that participate in internships. | Biannually | ACEs progress reports and results of surveys of students and faculty participating in these exchanges | Aggregation of numbers (of faculty and students) following consolidation of data from ACEs progress reports and the results of the survey of students and faculty participating in these exchanges | ACEs and RFU |

|  |
| --- |
| **ME PDO Table SPACE** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Monitoring & Evaluation Plan: Intermediate Results Indicators** | | | | | |
| **Indicator Name** | **Definition/Description** | **Frequency** | **Datasource** | **Methodology for Data Collection** | **Responsibility for Data Collection** |
| Number of female center directors or deputy directors | This measures the number of females leading as director or deputy director an ACE Impact center. | Once (beginning of project) | Profile reports from ACEs highlighting center team composition and submitted to ACE Impact online data portal. | Aggregation of number of centers with female center leaders indicated in the profile reports in the ACE Impact online data portal. | ACEs and RFU |
| Number of ACE related research publications in internationally recognized peer reviewed journals | This indicator tracks the number of research publications by ACE students and faculty and also their research collaboration with regional and international partners. As part of the ACE progress reporting, ACEs will submit to the ACE Impact online data portal the list of publications (title of article, name of journal and weblinks to the article). The list from each center will be validated by external experts. Each qualifying publication should have at least an ACE student or staff as a co-author and be related to the area of specialization of the ACE. The World Bank and the RFU will determine a list of journals that are acceptable. | Biannually | ACEs' progress reports submitted to the ACE Impact online data portal | Aggregation of number of qualifying publications from the ACE Impact online data portal | ACEs and RFU |
| Number of new nationally or regionally accredited programs (master's and PhDs) | This indicator measures quality of programs by considering the number of ACE programs that have been newly accredited either nationally or regionally. The data collected under this indicator will indicate the specific program/level of the national/regional accreditation and the accreditation agency used. The accreditation agency selected by the ACEs should be recognized in its capacity and need to be an agency satisfactory to the RFU and the World Bank. The accreditation agency will use its own standard methodology for assessing the ACEs. In the case where no national accreditation agency exists, arrangements can be made for existing agencies in neighboring countries to carry out the accreditation process. | Biannually | ACEs' and their host institutions’ records of certificates and reports issued by the accreditation agencies | Aggregation of number of approved certificates and reports submitted to the online data submission portal | ACEs and RFU |
| Amount in externally generated revenue by the ACEs | The amount underpinning this indicator includes externally generated revenue deposited into the ACE’s account from tuition fees, other student fees, joint research, research consultancies, fund raising and donations, or other external sources. These funds are for investments and operations of the ACE. It excludes all non-competitive government education and research subventions, including research grants (sale of consultancy work to the government is accepted as externally generated revenue). Funds from other governments (including donor assistance), other donors and development partners qualify only if the selection processes are competitive. | Biannually | Results of the review of ACEs' Progress Report; email/letter evidence of award; financial statements. | Aggregation of amounts of eligible externally generated revenue based on the results of the review of the data and evidence submitted by the ACEs. | ACEs and RFU |
| Share of master’s and PhD graduates employed within 6 months of graduation | This indicator measures the percent of graduates from ACEs master’s and PhD programs that are able to find jobs in a related field within six months following their graduation. A graduate tracer study tool will be used to obtain this information and the results entered into the online data portal. This tracer study will be administered by the PASET Benchmarking initiative host institution. | Annually | ACEs' progress reports and graduate tracer study results submitted to the ACE Impact online database portal. | Aggregation of number of graduates per cohort and number of graduates finding jobs in their fields within six months of graduating by consolidating results from the progress reports and the tracer study. | ACEs and RFU |
| Number of host institutions of ACEs participating in the regional benchmarking initiative | The indicator measures ACE host institutions commitment to investing in data useful for strategic planning and also for assessing the performance of the university in relation to other similar universities. The regional benchmarking exercise (which is under PASET) will be administered by the regional host institution for the benchmarking initiative. | Once every two years | ACEs' progress report and list of qualifying ACE host institutions submitted by the benchmarking host institution. | Aggregation of number of ACE host institutions that meet the criteria set for this indicator based on the progress reports and list from the regional benchmarking host institution. | ACEs and RFU |
| Number of new master’s and undergraduate students enrolled in programs at the emerging centers | This indicator measures the number of students who are enrolled in (i) master's and (ii) undergraduate degree programs at the Emerging centers. Emerging centers can only count each student once during their entire enrollment at the center. PhD students are not the critical focus for these Emerging centers as these centers need to build a quality pipeline of students. Exchange students will count as long as they are enrolled full time for at least a semester. This indicator will be disaggregated by gender. | Biannually | Emerging Centers' enrolment records | Aggregation of number of master’s and undergraduate students obtained from program/course registrations and submitted to the RFU through the ACE Impact project online data submission portal. | Emerging centers and RFU |
| Number of new nationally or regionally accredited programs (master’s and undergraduate) at the emerging centers | This indicator measures the quality of programs by considering the number of emerging center programs that have been newly accredited either nationally or regionally. The data collected under this indicator will indicate the specific program/level of the national/regional accreditation and the accreditation agency used. The accreditation agency selected by the emerging centers should be recognized in its capacity and needs to be an agency satisfactory to the RFU and the World Bank. The accreditation agency will use its own standard methodology for assessing the emerging center. In the case where no national accreditation agency exists, arrangements can be made for existing agencies in neighboring countries to carry out the accreditation process. | Biannually | Emerging centers’ records of certificates and reports issued by the accreditation agencies | Aggregation of number of approved certificates and reports submitted to the online data submission portal | Emerging centers and RFU |
| Number of faculty and students participating in academic exchanges within the region from and to the emerging centers | This indicator measures number of faculty and students from the emerging centers who are hosted by ACEs or when ACEs send their faculty/students to the emerging centers in the region for a “period” of at least two weeks (for teaching or research collaboration). Emerging centers will submit in the online data portal the name and contact details of faculty and students that participate in these exchanges, period of exchange, country, location and focal points of the exchange in the ACE institutions. | Biannually | Emerging centers’ progress reports and survey results of students and faculty submitted to the ACE Impact | Aggregation of numbers (of faculty and students) following consolidation of data from Emerging centers’ progress reports and the results of the survey of students and faculty participating in these exchanges. | Emerging centers and RFU |
| Share of undergraduate and master’s graduates of emerging centers employed within 6 months of graduating | This indicator measures the share of graduates from emerging centers’ undergraduate and master’s programs that are able to find jobs in a related field within six months after their graduation. A graduate tracer study tool will be used to obtain this information and the results entered into the online data portal | Annually | Emerging centers' progress report and graduate tracer study results submitted to the ACE Impact online database portal | Aggregation of number of graduates per cohort and number of graduates finding jobs in their fields within six months of graduating by consolidating results from the progress reports and the tracer study | Emerging centers and RFU |
| Number of well-functioning regional networks established by the project | This indicator measures the share of ACE networks that are functional. An independent expert committee will evaluate the success of regional activities for which the ACEs are taking the lead, including research collaborations, technical conferences, summer schools, faculty and student exchanges, faculty training, curriculum support development to weaker institutions within the network, influence on relevant regional sectoral institutions, etc. | Twice (at mid-term and beginning of year 5) | Expert evaluation report per network (incorporates progress reports of the centers (ACEs and emerging), surveys and interviews of members (faculty, students, sector members) of the specific ACE networks | Aggregation of well-functioning regional networks based on results in expert evaluation reports | ACEs and RFU |
| Number of host institutions of emerging centers participating in the regional benchmarking initiative | The indicator measures the emerging centers’ host institutions’ commitment to investing in data useful for strategic planning and also for assessing the performance of the university in relation to other similar universities. Universities must submit complete data on at least 85% of the indicators and also submit their intervention plan to improve their performance. The benchmarking initiative (which is under PASET) will be administered by the regional benchmarking host institution. | Once every two years | Emerging centers' progress report and list of qualifying Emerging center host institutions submitted by the benchmarking host institution. | Aggregation of number of emerging centers’ host institutions that meet the criteria set for this indicator and based on the progress reports and list from the regional benchmarking host institution | Emerging centers and RFU |
| Number of newly enrolled RSIF PhD students supported through the ACE Impact governments' contributions | This indicator measures the number of RSIF students that are being sponsored with a PhD scholarship through the contributions of the ACE Impact governments. This includes only scholarship funds that were transferred through the ACE Impact project | Biannually | RSIF project ISRs and reports from icipe (the RFU for the RSIF project) | Aggregation of number RSIF students that are being sponsored with a PhD scholarship through the contributions of the ACE Impact governments | icipe and RFU |
| Number of Project Beneficiaries | Sum of number of ACE students, ACE faculty and technical staff, private sector and governmental partners. | Annually | Administration data | Reporting from ACEs and governments. | RFU |
| Level of satisfaction of the Second ACE Impact students (Citizen Engagement indicator and part of Grievance Redress Mechanism) | Average satisfaction level of ACE students on a scale from 0 to 5 surveying main aspect of education provision, including teaching quality, facilities, and management of the studies. | Annual | Student survey. | Results of the student element of the ACE Impact stakeholders’ satisfaction on-line survey. | RFU |
| Level of satisfaction of the ACEs and Steering Committee on the support given by the RFU (Citizen Engagement indicator and part of the Grievance Redress Mechanism) | This indicator measures the quality of the services rendered by the RFU. | Annually | Results of ACE Impact stakeholders’ satisfaction on-line survey | Obtain performance information of the RFU from the annual ACE Impact stakeholders satisfaction survey. | RFU |
| Level of satisfaction of ACEs with the support from the National Governments (Citizen engagement and part of the Griveance Mechanism) | The indicator measures the number of ACEs and emerging centers that report on at least 85 percent of the project indicators to the RFU in a timely manner. | Biannually | Results of ACE Impact stakeholders’ satisfaction on-line survey. | Obtain performance information of the National Governments from the annual ACE Impact stakeholders satisfaction survey. | RFU |

|  |
| --- |
| **ME IO Table SPACE** |

|  |
| --- |
| **Disbursement Linked Indicators Matrix** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **DLI\_TBL\_MATRIX** |  | | | |
| **DLI 1** | Institutional readiness | | | |
| **Type of DLI** | **Scalability** | **Unit of Measure** | **Total Allocated Amount (USD)** | **As % of Total Financing Amount** |
| Output | No | Percentage | 7,923,333.00 | 11.00 |
| **Period** | **Value** | | **Allocated Amount (USD)** | **Formula** |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | Baseline | 0.00 |  |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 1 | 100.00 | 7,923,333.00 | See verification protocol table |  |  |  |  |  | | --- | --- | --- | --- | | Year 2 | 100.00 | 0.00 |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 3 | 100.00 | 0.00 |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 4 | 100.00 | 0.00 |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 5 | 100.00 | 0.00 |  | | | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **DLI\_TBL\_MATRIX** |  | | | |
| **DLI 2** | Development Impact of ACE Center | | | |
| **Type of DLI** | **Scalability** | **Unit of Measure** | **Total Allocated Amount (USD)** | **As % of Total Financing Amount** |
| Output | Yes | Percentage | 3,617,778.00 | 4.00 |
| **Period** | **Value** | | **Allocated Amount (USD)** | **Formula** |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | Baseline | 0.00 |  |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 1 | 0.00 | 0.00 | See verification protocol |  |  |  |  |  | | --- | --- | --- | --- | | Year 2 | 20.50 | 753,333.00 |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 3 | 50.00 | 1,055,556.00 |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 4 | 100.00 | 1,808,889.00 |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 5 | 100.00 | 0.00 |  | | | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **DLI\_TBL\_MATRIX** |  | | | |
| **DLI 3** | Quantity of Students (with focus on gender and regionalization) | | | |
| **Type of DLI** | **Scalability** | **Unit of Measure** | **Total Allocated Amount (USD)** | **As % of Total Financing Amount** |
| Output | Yes | Percentage | 16,528,333.00 | 16.00 |
| **Period** | **Value** | | **Allocated Amount (USD)** | **Formula** |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | Baseline | 0.00 |  |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 1 | 12.00 | 1,963,622.00 | See verification protocol table below |  |  |  |  |  | | --- | --- | --- | --- | | Year 2 | 29.00 | 2,920,722.00 |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 3 | 52.00 | 3,637,478.00 |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 4 | 75.00 | 3,902,367.00 |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 5 | 100.00 | 4,104,144.00 |  | | | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **DLI\_TBL\_MATRIX** |  | | | |
| **DLI 4** | Quality of Education and Research (through international accreditation, research publications and improved teaching and research infrastructure) | | | |
| **Type of DLI** | **Scalability** | **Unit of Measure** | **Total Allocated Amount (USD)** | **As % of Total Financing Amount** |
| Output | Yes | Percentage | 29,962,467.00 | 33.00 |
| **Period** | **Value** | | **Allocated Amount (USD)** | **Formula** |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | Baseline | 0.00 |  |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 1 | 6.00 | 1,479,733.00 | See verification protocol table below |  |  |  |  |  | | --- | --- | --- | --- | | Year 2 | 18.00 | 3,353,956.00 |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 3 | 56.00 | 11,936,556.00 |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 4 | 81.00 | 7,369,889.00 |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 5 | 100.00 | 5,822,333.00 |  | | | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **DLI\_TBL\_MATRIX** |  | | | |
| **DLI 5** | Relevance of Education and Research (through externally generated revenue, internships, and entrepreneurship) | | | |
| **Type of DLI** | **Scalability** | **Unit of Measure** | **Total Allocated Amount (USD)** | **As % of Total Financing Amount** |
| Output | Yes | Percentage | 20,083,756.00 | 22.00 |
| **Period** | **Value** | | **Allocated Amount (USD)** | **Formula** |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | Baseline | 0.00 |  |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 1 | 7.00 | 1,440,667.00 | See verification protocol table |  |  |  |  |  | | --- | --- | --- | --- | | Year 2 | 24.00 | 3,386,778.00 |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 3 | 53.00 | 5,746,667.00 |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 4 | 78.00 | 5,047,222.00 |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 5 | 100.00 | 4,462,422.00 |  | | | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **DLI\_TBL\_MATRIX** |  | | | |
| **DLI 6** | Timeliness and quality of fiduciary management | | | |
| **Type of DLI** | **Scalability** | **Unit of Measure** | **Total Allocated Amount (USD)** | **As % of Total Financing Amount** |
| Output | Yes | Percentage | 4,797,666.00 | 7.00 |
| **Period** | **Value** | | **Allocated Amount (USD)** | **Formula** |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | Baseline | 0.00 |  |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 1 | 13.00 | 619,667.00 | See verification protocol table |  |  |  |  |  | | --- | --- | --- | --- | | Year 2 | 36.00 | 1,109,333.00 |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 3 | 55.00 | 916,000.00 |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 4 | 77.00 | 1,088,333.00 |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 5 | 100.00 | 1,064,333.00 |  | | | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **DLI\_TBL\_MATRIX** |  | | | |
| **DLI 7** | Institutional Impact | | | |
| **Type of DLI** | **Scalability** | **Unit of Measure** | **Total Allocated Amount (USD)** | **As % of Total Financing Amount** |
| Output | Yes | Percentage | 13,886,668.00 | 8.00 |
| **Period** | **Value** | | **Allocated Amount (USD)** | **Formula** |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  | | --- | --- | --- | --- | | Baseline | 0.00 |  |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 1 | 0.00 | 988,889.00 | See verification protocol table |  |  |  |  |  | | --- | --- | --- | --- | | Year 2 | 17.00 | 2,748,889.00 |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 3 | 29.00 | 2,285,556.00 |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 4 | 56.00 | 3,276,667.00 |  |  |  |  |  |  | | --- | --- | --- | --- | | Year 5 | 100.00 | 4,586,667.00 |  | | | | | | |

|  |
| --- |
| **Verification Protocol Table: Disbursement Linked Indicators** |

|  |  |
| --- | --- |
|  |  |
| **DLI 1** | Institutional readiness |
| **Description** | • DLR# 1.1: Basic Readiness: Financing agreement is effective; Approved Implementation Plan and Procurement and Financial Management Manuals. Core center staff designated, including a non-staff student representation • DLR# 1.2: Full Readiness: At least one leading center team member possesses a project management certification; Center’s website is functional, with student handbook on website; sectoral advisory board (SAB) constituted and has endorsed the Implementation Plan. |
| **Data source/ Agency** | Centers’ progress reports and websites (documents including: FM/procurement manuals, student handbooks, Implementation plans) |
| **Verification Entity** | RFU |
| **Procedure** | Disbursed when center submits evidence of achievement to RFU including:   1. For DLR 1.1:Basic readiness: Financing Agreement is effective; The RFU has approved of the center’s Implementation Plan and the Procurement and Financial Management Manuals.  Official designation of the core team members (Center leader, Deputy Center leader, FM responsible, procurement responsible, M&E responsible and sectoral liaison). Further, the Center has designated a non-staff student representative to the RFU. 2. For DLR 1.2:  Full readiness: Project Management certification for at least one leading team member; Functional center website (a link to the center’s website); Student handbook on the website with policies for sexual harassment and scholarships; and Sectoral Advisory Board (SAB) constituted and its endorsement of the Implementation Plan.   The value of this DLI varies between countries from US$300,000 equivalent to US$450,000 equivalent per milestone. The country specific value is in the Financing Agreement. |

|  |  |
| --- | --- |
|  |  |
| **DLI 2** | Development Impact of ACE Center |
| **Description** | • DLR#2: Independent, external evaluation of the development impact of the ACE Impact center conducted in Year 3 and beginning of Year 4. (Renewal centers will however have their assessment in Year 2 and Year 4) |
| **Data source/ Agency** | Centers’ progress reports; SAB reports; and Interviews |
| **Verification Entity** | RFU/External Evaluators |
| **Procedure** | Independent, external evaluation of the development impact of the ACE center conducted during Year 3 (Year 2 for renewals) and end of Year 4 of project implementation.  External evaluators assess and score development impact of the center. In Year 3, score is based upon progress towards development impact. In Year 4, score is based upon development impact. The criteria for evaluation will include: (i) Relevance and impact of graduates on society, including the share of graduates hired in the target sector and feedback from key employers; (ii) relevance and impact of research on society; (iii) progress on DLIs; (iv) SAB annual reports; and (v) interviews with center graduates and sectoral stakeholders. The detailed scoring rubrics will be defined in the Regional Operations Manual.  The value of this DLI varies between countries from US$25,000 equivalent to US$35,000 equivalent per point in the score (point scale 1 to 5). The country specific value is in the Financing Agreement. |

|  |  |
| --- | --- |
|  |  |
| **DLI 3** | Quantity of Students (with focus on gender and regionalization) |
| **Description** | • DLR#3.1: New eligible PhD students • DLR#3.2: New eligible master’s students • DLR#3.3: New eligible professional short-term students • DLR#3.4: New eligible first degree students (for select CoEngg & Emerging centers) |
| **Data source/ Agency** | Centers’ enrolment reports; progress reports; and student surveys |
| **Verification Entity** | External verifier |
| **Procedure** | 1. Centers submit report with names and contacts of students to RFU. RFU submits information to external verifier. Verifier contacts students to validate list Center submits enrolment and progress reports with names and contacts of students to RFU. RFU submits information to external verifier. Verifier contacts students to validate list. 2. Number of new eligible doctoral and master’s degree students as well as short-term professional students of whom at least 30 percent combined must be regional students. For select institutions receiving support to CoEngg and emerging centers, first degree students are eligible as well. The 30 percent requirement on regional students does not apply to emerging centers. The project operational manual and the approved. Implementation Plan will define what constitutes an eligible student for each type of center and degree level. 3. PhD students: US$10,000 per male national student, US$12,500 per female national student, US$12,500 per male regional student, and US$15,600 per female regional student. For Master students: US$2,000 per national student, US$2,500 per female student, US$4,000 per regional student and US$5,000 per regional female student. For short-course professional students: US$400 per national male student, US$500 per female national student, US$800 per regional male student, and US$1,000 per female regional student. For first degree (bachelor) students: US$1,000 per national male student, US$1,500 per national female student. All US$ amounts are US$ equivalent. |

|  |  |
| --- | --- |
|  |  |
| **DLI 4** | Quality of Education and Research (through international accreditation, research publications and improved teaching and research infrastructure) |
| **Description** | • DLR#4.1: Towards International accreditation with inputs from center's advisory boards • DLR#4.2: ACE Impact related research publications in internationally recognized peer reviewed journals; • DLR#4.3: Completion of milestones for improved learning and research infrastructure specified in the approved Implementation Plan of each center. |
| **Data source/ Agency** | Data source/ Agency Centers’ progress reports; student survey results; verifiers’ reports; accreditation certificates and other assessment reports |
| **Verification Entity** | RFU/External Verifier |
| **Procedure** | Center submits annual report to RFU and RFU coordinates verification of results.   1. DLR 4.1 disbursement occurs if the center shows evidence (copy of certificate, email confirmation) of achievement of a specific accreditation or assessment (international, national, regional, gap assessment, self-evaluation); US$300,000 per program internationally accredited; US$100,000 per program nationally/regionally accredited; US$100,000 per gap-assessment/self-evaluation undertaken; US$50,000 for new/revamped courses meeting international standards and approved by the SAB. 2. DLR 4.2 is achieved if the article is accepted and published in an internationally recognized peer-reviewed journal acceptable to the World Bank and the RFU and in addition, an independent subject matter expert confirms that an ACE Impact student or staff is a co-author and that the article is in an area related to the specialization of the center.  US$10,000 per article co-authored by ACE Impact student/faculty and national partners; US$15,000 per article co-authored with regional partners. 3. DLR 4.3 is achieved if external verifiers confirm approved onsite civil works and equipment purchase, installation and usage.  Each center will formulate its civil works and large equipment purchase (including installation and usage) milestones which will be reviewed and approved by the World Bank. Compliance with safeguards requirements will be verified for eligible activities (including preparing, consulting upon, reviewing,  approval and disclosing of ESIAs/ESMPs). US$300,000 per milestone   All amounts are US$ equivalent. |

|  |  |
| --- | --- |
|  |  |
| **DLI 5** | Relevance of Education and Research (through externally generated revenue, internships, and entrepreneurship) |
| **Description** | • DLR#5.1: Externally generated revenue; • DLR#5.2: Number of students and faculty with at least 1-month period internship in relevant sector institutions; • DLR#5.3: Meeting milestones for developing entrepreneurship, innovation, start-up companies, and commercialization support programs |
| **Data source/ Agency** | Centers’ progress reports; Centers’ accounts details and faculty/students survey reports |
| **Verification Entity** | RFU/External Verifier |
| **Procedure** | 1. For DLR 5.1, eligible sources of revenue include tuition fees, other student fees, joint research, research consultancies, fund raising and competitive grants (from governments and development partners) or other external sources. Evidence submitted to the RFU will be in the form of signed/formal funding award letters and verification by financial auditors showing transfer of the funds to the respective center. US$1 for each US$1 generated from national, or international non-firm sources; US$2 for each US$ 1 generated from regional or from private/ sectoral sources; 2. DLR 5.2 is achieved if external verifier validates the list of students/faculty that have participated in at least 1-month period internships in relevant industry/ sector-relevant institutions (by country/region).  US$1,000 per period in country and US$1,500 per period in region; 3. DLR 5.3  is achieved if external verifiers confirm pre-determined and approved milestones have been met. One milestone. US$100,000 for the milestone.   All amounts are US$ equivalent. |

|  |  |
| --- | --- |
|  |  |
| **DLI 6** | Timeliness and quality of fiduciary management |
| **Description** | • DLR#6.1. Timely fiduciary reporting including timely submissions of IFRs and of financial and procurement audit reports for the period for the center • DLR#6.2. Functional institutional oversight of fiduciary management. That is, functioning internal audit unit and functioning audit committee (under the university’s council) that would support the center; • DLR#6.3. Transparency of ACE expenses; • DLR#6.4. Quality of Procurement planning. Share of the originally approved procurement plan that was executed. |
| **Data source/ Agency** | Centers’ progress reports, websites and time stamp of submission of documents |
| **Verification Entity** | RFU |
| **Procedure** | DLR 6.1 is achieved if there is a time stamp evidence of timely submission of the IFR, financial and procurement audit reports in the ACE Impact online data portal or copy of email submission to RFU if online portal is offline at time of submission. Timeliness implies respect of the deadlines established in the Financing Agreement. The procurement audit for the financial year is due when the financial audit is due. The value of this DLI varies between countries from US$15,000 equivalent to US$ 30,000 equivalent per year. The country specific value is in the Financing Agreement;  DLR 6.2  is achieved if the center submits weblink to internal audit report or attachment of report and a weblink to audit committee minutes or attachment of minutes which mention a review of the audit reports as well as a review by the university Board of the ACE hosting.  The value of this DLI varies between countries from US$15,000 equivalent to US$ 30,000 equivalent per year. The country specific value is in the Financing Agreement;  DLR 6.3 is achieved if there is self-confirmation by the center that the approved budget, annual work plan, IFRs, with an annex on detailed expenditures, project financial and procurement audit reports are visibly accessible on the center’s websites. The value of this DLI varies between countries from US$15,000 equivalent to US$ 30,000 equivalent per year. The country specific value is in the Financing Agreement;  DLR 6.4 The share is calculated in terms of value of contracts (not procurement activities). The value of this DLI varies between countries from US$15,000 equivalent to US$ 30,000 equivalent per year. The country specific value is in the Financing Agreement; |

|  |  |
| --- | --- |
|  |  |
| **DLI 7** | Institutional Impact |
| **Description** | • DLR#7.1: ACE Impact host institution develops and endorses a meaningful university- wide regional strategy (including student affairs). • DLR#7.2: ACE Impact host institution undertakes open, merit-based competitive selection of department heads related to the ACEs and university head. • DLR#7.3: ACE Impact host institution undertakes institutional wide international accreditation, gap assessments and self-evaluations following established methodology • DLR#7.4: ACE Impact host institution participates in the PASET Regional Benchmarking initiative and submits on the required indicators • DLR#7.5: ACE Impact host institution meets milestones for promoting institutional impact. Each approved Center Implementation Plan contains milestone(s) of results and activities to improve institutional impact • DLR#7.6: ACE Impact host institution participates in the National Research and Education Network, including services such as (1) at least 0.5 gbps broadband connection, (2) access to electronic library/database content, (3) access to High Performance Computing, and (4) access to high-performance computer applications. |
| **Data source/ Agency** | Centers’ progress reports; reports from host universities, accreditation certificates and other assessment reports; PASET benchmarking exercise report |
| **Verification Entity** | RFU |
| **Procedure** | 1. DLR 7.1 is achieved if independent experts verify that a new or existing strategic plan for regionalization is in place for the ACE Impact host institution. The strategy will include policies and interventions that would ensure that the institution becomes regionally competitive (if not globally), highlighting, for example, how to attract and retain more regional students and partners (both from industry and academia). US$100,000 equivalent; 2. DLR 7.2 is achieved if ACE Impact host institution submits evidence that department heads/deans related to the ACEs and university head are recruited through open, merit-based competitive selection. US$200,000 equivalent for university head recruitment and US$50,000 equivalent for dean/department heads; 3. DLR 7.3 is achieved if the ACE Impact host institution submits evidence of achievement of a specific accreditation or assessment. The accreditation agency used must be acceptable to the World Bank and the RFU. US$ 200,000 equivalent for international accreditation; US$75,000 equivalent each for gap assessment/self-evaluation; 4. DLR 7.4 is achieved if the PASET Benchmarking host institution confirms the participation of the ACE Impact host institution in the benchmarking exercise and its submission of an acceptable intervention plan. US$ 50,000 equivalent for each year the university participates (up to 2 years); 5. DLR 7.5 is achieved if the ACE host university meets its milestones and those milestones are independently verified as achieved. US$ 200,000 equivalent per institutional impact milestone. 6. DLR 7.6 is achieved if the ACE host institutions meets pre-formulated and approved milestones in their participation in the NREN services and results show clear evidence that students and faculty are receiving improved access to the services (as formulated by each institution). US$ 100,000 equivalent per year for a single or bundle of services |

Note: The above DLI matrix presents the planned achievement per year in terms of percentage of the results to be achieved. The table below presents the achievement targets per specific DLI and DLR. This is aggregated across the five participating countries. The achievement targets for each country are available in the FA for each country.

**Table 7: Achievement Targets for each Disbursement Linked Indicator and Disbursement Linked Results**

|  | ***DLI Total Financing***  ***(US$ equivalent)*** | ***DLI*** | ***DLRs and Indicative timeline for DLR achievement*** | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ***Baseline*** | ***Year 1*** | ***Year 2*** | ***Year 3*** | ***Year 4*** | ***Year 5*** |
| **DLI 1:** Institutional readiness results | 7,923,333 | 0 | 36 | 0 | 0 | 0 | 0 |
| Allocated amount: | 7,923,333 |  | 7,923,333 | 0 | 0 | 0 | 0 |
| **DLI 2:** Development Impact of ACE Center | 3,617,778 | 0 | 0 | 44 | 60 | 104 | 0 |
| Allocated amount: | 3,617,778 | 0 | 0 | 753,333 | 1,055,556 | 1,808,889 | 0 |
| **DLI 3**: Quantity of students with focus on gender and regionalization | 16,528,333 | 0 | 97 PhD students  169 Master students  321 Short course professional students  120 first degree students | 124 PhD students  302 Master students  479 Short course professional students  180 first degree students | 162 PhD students  353 Master students  640 Short course professional students  300 first degree students | 162 PhD students  375 Master students  866 Short course professional students  360 first degree students | 162 PhD students  408 Master students  966 Short course professional students  420 first degree students |
| *Allocated amount:* | 16,528,333 | *0* | 1,963,622 | 2,920,722 | 3,637,478 | 3,902,367 | 4,104,144 |
| **DLI 4**: Quality of education and research through international accreditation, research publications and improved teaching and research infrastructure | 29,962,467 | 0 | 2 accreditation steps  115  published research articles  0 milestones for teaching and research infrastructure | 45 accreditation steps  116  published research articles  1 milestone for teaching and research infrastructure | 18 accreditation steps  152  published research articles  43 milestones for teaching and research infrastructure | 16 accreditation steps  157  published research articles  22 milestones for teaching and research infrastructure | 16 accreditation steps  168  published research articles  2 milestones for teaching and research infrastructure |
| *Allocated amount:* | 29,962,467 |  | 1,479,733 | 3,353,956 | 11,936,556 | 7,369,889 | 5,822,333 |
| **DLI 5**: Relevance of education and research through externally generated revenue, internships, and entrepreneurship | 20,083,756 | 0 | 1,232,778 in revenue  208 Internships  0 Entrepreneur milestones | 2,901,667 in revenue  485 Internships  0 Entrepreneur milestones | 3,656,111 in revenue  562 Internships  23 Entrepreneur milestones | 4,344,444 in revenue  703 Internships  0 Entrepreneur milestones | 3,579,089 in revenue  783 Internships  1 Entrepreneur milestones |
| *Allocated amount:* | 20,083,756 | 0 | 1,440,667 | 3,386,778 | 5,746,667 | 5,047,222 | 4,462,422 |
| **DLI 6**: Timeliness and quality of fiduciary reporting | 4,797,667 | 0 | 12Timely Fiduciary reporting  21 Functional institutional oversight of fiduciary mngt  26 transparency of ACE expenses  0 quality of procurement planning | 26 Timely Fiduciary reporting  26 Functional institutional oversight of fiduciary mngt  26 transparency of ACE expenses  26 quality of procurement planning | 26 Timely Fiduciary reporting  7 Functional institutional oversight of fiduciary mngt  26 transparency of ACE expenses  26 quality of procurement planning | 26Timely Fiduciary reporting  26 Functional institutional oversight of fiduciary mngt  23 transparency of ACE expenses  26 quality of procurement planning | 26 Timely Fiduciary reporting  26 Functional institutional oversight of fiduciary mngt  26 transparency of ACE expenses  23 quality of procurement planning |
| *Allocated amount:* | 4,797,667 |  | 619,667 | 1,109,333 | 916,000 | 1,088,333 | 1,064,333 |
| **DLI 7**: Institutional impact | 13,886,667 | 0 | 0 University regional strategy  0  Open and competitive selection of the head of university or dean  0  Institutional accreditation steps  0  PASET Benchmarking  0 Milestones on institutional impact  16 ICT Services for innovation in teaching and research | 15 University regional strategy  0  Open and competitive selection of the head of university or dean  0  Institutional accreditation steps  25  PASET Benchmarking  0 Milestones on institutional impact  16 ICT Services for innovation in teaching and research | 0 University regional strategy  0  Open and competitive selection of the head of university or dean  25  Institutional accreditation steps  0  PASET Benchmarking  0 Milestones on institutional impact  16 ICT Services for innovation in teaching and research | 8 University regional strategy  3  Open and competitive selection of the head of university or dean  0  Institutional accreditation steps  25  PASET Benchmarking  8 Milestones on institutional impact  16 ICT Services for innovation in teaching and research | 0 University regional strategy  0  Open and competitive selection of the head of university or dean  23  Institutional accreditation steps  0  PASET Benchmarking  7 Milestones on institutional impact  16 ICT Services for innovation in teaching and research |
| *Allocated amount:* | 13,886,667 |  | 988,889 | 2,748,889 | 2,285,556 | 3,276,667 | 4,586,667 |
| **Total IDA Financing for DLIs** | **96,800,000** |  | **14,415,911** | **14,273,011** | **25,577,811** | **22,493,367** | **20,039,900** |

|  |
| --- |
| **ANNEX 1: Project Institutional and Implementation Arrangements** |

1. The following entities will be directly involved in various aspects of the project, including implementation, steering, facilitation and M&E: the PSC, RFU, NSCs, ACE Impact centers, partner academic and research institutions, industry and other sectoral partners and DPs. The roles and responsibilities for each of these players are described below. Detailed ToRs are in the POM.
2. **ACE Impact Center**. The project activities will principally be implemented by the selected centers with support from their respective host universities. The individual center is responsible for its strategic planning, proposal preparation and implementation, fiduciary activities, M&E, and reporting.
3. **Regional Facilitation Unit (RFU)**. The RFU hosted within the AAU will coordinate and facilitate regional-level activities and provide capacity building support to the ACE Impact centers.
4. **ACE National Steering Committee (NSC) and other government-level arrangements**. Implementation support at the national level will be provided by the NSC. Other government stakeholders will also support the project at the national level as described further below.
5. **ACE Project Steering Committee (PSC).** The project will operate under the overall guidance and oversight of the PSC whose main task is to set guidelines for the project and to ensure that the project objectives are achieved

**ACE Impact Centers**

1. Each selected center will be responsible for implementing its own proposal as part of Components 1 and 2. Each center will implement and monitor project activities both at the national and regional levels that fall under its respective responsibilities. Each selected center will ensure that project funds are planned for and invested according to the schedule and within the framework agreed upon in the PFA signed with the government. Table A1.1 below shows all the centers (New centers, Renewal centers, and Emerging centers) selected to participate in the proposed Second ACE Impact Project.

**Table A1.1. *Selected ACE Impact Centers for Proposed Second ACE Impact Project***

***(Renewals, New and Emerging centers)***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sub-component 1.1: EXISTING AFRICA CENTERS OF EXCELLENCE THAT HAVE BEEN RENEWED (Renewal centers)** | | | | | |
| 1. 1. | ACE: Mathematical Sciences, Computer Science and Applications | University of Abomey Calavi | Benin | Applied math & statistics | STEM |
| 1. 9. | ACE: Genomics of Infectious Diseases (ACEGID) | Redeemer's University | Nigeria | Genomics of infectious diseases | Health |
| 1. 10. | ACE: Neglected Tropical Diseases and Forensic Biotechnology (ACENTDFB) | Ahmadu Bello University | Nigeria | Neglected tropical diseases | Health |
|  | ACE: Reproductive Health Innovation (CERHI) | University of Benin | Nigeria | Reproductive Health | Health |
|  | ACE: Dry Land Agriculture (CDA) | Bayero University, Kano | Nigeria | Dryland Agriculture | Agric |
| 1. 3. | ACE: Food Technology and Research (CEFTER) | Benue State University | Nigeria | Food tech and research | Agric |
|  | ACE: OAU ICT-DRIVEN KNOWLEDGE PARK (OAU-OAK) | Obafemi Awolowo University | Nigeria | Digital Development | STEM |
| 1. 5. | ACE: Oilfield Chemicals Research (CEFOR) | University of Port Harcourt | Nigeria | Oil and gas | STEM |
|  | ACE: Poultry Science (CERSA) | University of Lomé | Togo | Poultry science | Agric |
| **Sub-component 1.2: NEW AFRICA CENTERS OF EXCELLENCE (New centers)** | | | | | |
| 1. 7 | ACE: Water and Sanitation (C2EA) | University of Abomey Calavi | Benin | Water & sanitation | STEM |
|  | ACE: Pastoral Productions – Meat, Milk, Leather and Skins (CERPP) | Université Abdou Moumouni | Niger | Livestock | Agric |
|  | ACE: Public Health and Toxicological Research | University of Port Harcourt | Nigeria | Nursing | Health |
|  | ACE: Centre for Population Health and Policy | Bayero University, Kano | Nigeria | Nursing | Health |
|  | ACE: Covenant Applied Informatics and Communication | Covenant University | Nigeria | Digital Development | STEM |
|  | ACE: Technology Enhanced Learning (ACETEL) | National Open University of Nigeria | Nigeria | Digital Development | STEM |
|  | ACE: Innovative and Transformations Stem Education (CITSE) | Lagos State University | Nigeria | STEM Education | Education |
|  | ACE: Mycotoxin and Food Safety | Federal University of Technology, Minna, Nigeria | Nigeria | Mycotoxin and food safety | Health |
|  | ACE: Drug Research, Herbal Medicine Development and Regulatory Science | University of Lagos | Nigeria | Herbal medicine development and regulation | Health |
|  | ACE: New Pedagogy in Engineering Education (ACENPEE) | Ahmadu Belo University | Nigeria | Engineering education | STEM |
|  | ACE: Sustainable Power and Energy Development (ACE\_SPED) | University of Nigeria Nsukka | Nigeria | Power | STEM |
|  | ACE: Future Energies and Electrochemical Systems | Federal University of Technology, Owerri, Nigeria | Nigeria | Renewable energy | STEM |
|  | ACE: Power Management (CERME) | University of Lomé | Togo | Power | STEM |
| 1. 13 | ACE: Sustainable Cities in Africa (DOUNEDON) | University of Lomé | Togo | Urban Design | Soc./ Econ Sci. |
| **Sub-component 2.1: EMERGING CENTERS OF EXCELLENCE (Emerging centers)** | | | | | |
| 1. 11 | Emerging Center: Innovative Teaching/Learning of Mathematics and the Sciences for SSA (CE-IEA-MS4SSA | Université Abdou Moumouni | Niger | Math & Science Education | Education |
|  | Emerging Center: Mining Environment | EMIG | Niger | Mining | STEM |
|  | Emerging Center: Science, Technology and Engineering for Entrepreneurship | Gambia Technical Training Institute | The Gambia | Engineering/ Math & Science Education | STEM |
| **Add-on: College of Engineering (CoEngg)** | | | | | |
|  | Collège of Engineering: Energy, Transport Infrastructures and Environment (CoE-EIE) | University of Abomey Calavi | Benin | Engineering | STEM |

Note: The Côte d’Ivoire Renewal and New centers to be funded solely by AFD under a separate project are:

* 1. ACE: Mining and Mining Environment (CEA-MEM) at the National Polytechnic Institute, - Houphouët-Boigny Côte d’Ivoire, (INP-HB)
  2. ACE: Climate Change, Biodiversity and Sustainable Agriculture (CCBAD) at the Félix Houphouët-Boigny University (UFHB)
  3. ACE: Statistics and Quantitative Economics at the National School of Statistics and Applied Economics (ENSEA)
  4. New Center: ACE: Valorization of Waste Products with High Value Added (VALOPRO) at the INP-HB.

1. **Each ACE Impact center will have an implementation team established to implement their own ACE Impact Center sub-project on a day-to-day basis.** Each center will be responsible for its own strategic and implementation plans, fiduciary and M&E activities. The team will be led by the center director, who will be a recognized educator/researcher with expertise in the academic focus area of the center. The center director will be supported by a deputy director and faculty from all departments contributing to the center. Each center team will also consist of key staff members specializing in procurement, FM, M&E, communications and industry engagement who will support the center’s day-to day operations and assist with fiduciary tasks. The host university will provide to the centers administrative support and assistance on the safeguards tools to be developed by the centers. The center team will be advised by an SAB (composed of high-level representatives from the center’s industry/sector partners) and an IAAB (comprised of leading academics from around the world). Both the SAB and the IAAB will contribute to the development of the education programs of the center, and will also provide advice, insight and oversight for the applied research program. A student representative (non-staff) will be designated to represent the students of the center and will participate in the center’s staff meetings. For an institution with more than one center, a similar structure will apply with an institutional leader assigned to manage all the centers at that institution in addition to the center directors. Each host institution will also provide to their respective centers, administrative support and assistance on the safeguards tools to be developed by the centers.
2. Centers will implement key tasks under their respective sub-components. A summary of these tasks includes the following:
   * Prepare and implement an agreed implementation plan that encompasses the vision of the center and aligns with the PDO. The implementation plan will cover activities to strengthen the quality and relevance of the education and applied research programs that are within the focus areas of the center. The implementation plan can be amended during the project life-time provided the ACE center obtains approval from the World Bank.
   * Prepare annual work plans based on the approved proposal and implementation plan. The annual work plan will be reviewed on an annual basis by subject-matter experts hired by the RFU. The detailed activities of each center will be in the project POM.
   * Each center supported under Component 1 will be required to serve as a hub for a network of partner institutions within the sub-region. Partner institutions can be universities, industry, other types of higher education institutions or research institutes and government agencies within the thematic area hosted by the center. A detailed partnership agreement between the center and each partner institution will specify the nature of the partnership between the two institutions. The ACE center and its network of partners will agree to an annual action plan to be implemented by the partners.
   * Each center will be responsible for its own fiduciary and safeguards functions including undertaking its own procurement, maintaining proper financial accounts according to project requirements and implementing its M&E plan as well as its approved ESMP.
   * Funds for capacity building in partner institutions will be held and managed by the ACE Impact center leading the network. All fiduciary and M&E matters related to the use of these funds will fall under the purview of the ACE Impact centers.
3. **A typical example of ACE implementation arrangements is the arrangements for the Africa Center of Excellence in Oil Fields Chemical Research (CEFOR), UniPort in Nigeria (established under ACE I).** The ACE is headed by the center director, who oversees the day-to-day running of the center and is assisted by the deputy center director. The center director is based in the Center’s Management Office (CMO), also home to three leaders representing the three research units working on CEFOR and the capacity building unit. The CMO is responsible for the management of the technical, scientific, and reporting aspects of their specific units. The ACE center operates semi-autonomously within the general structure of UniPort in terms of day-to-day administration and FM. Several departments and faculty of the university contribute with complementary expertise in petrochemical research within the oil field industry and training programs of the center: oil and gas technology, geosciences, occupational health and safety, gas refining and offshore technology. The research, training and other academic activities of the Center are planned and guided by a committee comprising representatives from industry, key partner institutions and an international scientific advisory board comprised of high-level international experts.
4. **Institutional capacity**. As part of project preparation, assessments of the capacities of the centers were carried out. This entailed fiduciary assessment of each center’s FM capacities, and a selected number of centers’ procurement capacity was also assessed. Based on the outcome of the assessments, action plans (see Annex 2) have been developed to ensure the risks are mitigated. Funding from the ACE Impact center will support activities under these capacity-building plans. Further, a regional level capacity-building workshop will be held ahead of the project launch to ensure full awareness of project requirements, and assessment of each center’s capacity shortcomings and challenges. Follow-up trainings at the regional level will be organized during implementation.

**Regional Facilitation Unit (RFU) (hosted within the Association of African Universities - AAU)**

1. The RFU will be hosted within the AAU. The AAU will be responsible for implementing the Sub-component 3.1 activities of the proposed Second ACE Impact Project, which will entail regional facilitation and implementation support to the centers.
2. The AAU has met the required criteria to be selected as the RFU for this regional higher education project. Of importance to the project is the fact that AAU is currently the RFU for the ACE I Project and so has developed capacity with regard to the ACE model and facilitating project-level M&E and logistic activities. Other criteria that were considered in the selection of the RFU included: (i) proven capacity to manage IDA and other donor funds; (ii) its location in the sub-region and its established and working relationships with higher education institutions; (iii) experience working across sectors; (iv) evidence (based on due diligence assessment) of well-established FM systems; (v) regional coverage across thematic areas; and (vi) bilingual capacity. The PSC agreed to keep AAU as the RFU for both the First and the proposed Second ACE Impact projects while it continues to play the same role for the ACE I Project.
3. The detailed tasks of the RFU are provided in the POM. These are summarized as follows:
4. Coordinate and fund the activities of the PSC to fulfill its tasks;
5. Facilitate the call for proposals, evaluation and selection of centers/institutions during project preparation;
6. Ensure effective and efficient coordination and facilitation of the project activities, including the administrative activities;
7. Support the M&E needs of the selected centers as well as aggregated M&E needs of the overall project, benchmarking exercises and graduate tracer studies;
8. Communicate, on a regular basis, with the centers, subject-matter experts, third party verifiers and the project’s broader network of partners;
9. Provide support and capacity building for centers concerning Environmental and Safeguards compliance requirements;
10. Coordinate implementation support missions of experts to the centers and verify semi-annual reports on DLR achievements and project implementation results submitted by the centers;
11. Develop key documents such as the POM and ToRs for consultants hired to work on project related activities;
12. Facilitate capacity building workshops and sharing of experiences across the centers, such as knowledge sharing workshops for the centers and their partner institutions; and
13. Promote partnerships among centers and between centers and partners (academic and sectoral) outside of the ACE networks.
14. The Grant FA between the World Bank and the RFU defines the terms and conditions for this engagement. Funding for the RFU is under Component 3 of the First ACE Impact Project. The RFU will have a full-time project manager who will, among other responsibilities, lead the RFU, be a member of the AAU Project management team, and report to the AAU Secretary General. The RFU will also have professional staff with finance and accounting, M&E, IT, communications and project management skills requisite for project needs. The RFU will also hire consultants to support regional level coordination of the required environmental and social safeguards documents from the centers. On an annual basis performance metrics will be agreed on based on the RFU annual work plans and budgets. The RFU will be evaluated at the end of each year on the basis of such performance metrics
15. Funds under Component 3 will be disbursed to the RFU against a statement of expenditures (SoE), based on an annual work plan and a procurement plan agreed upon with the PSC and the World Bank. The RFU will report to the PSC and the World Bank through semi-annual meetings.

**National Steering Committee (NSC)**

1. Project implementation support and supervision at the national level will be undertaken by the NSC. The mandate will be to receive and review reports, work plans and budgets funded under Component 1, Sub-component 2.1 and Sub-component 3.2 in that country. The detailed ToRs are included in the POM. The specific tasks of the NSC will include the following:
2. Undertaking semi-annual performance and progress reviews for the selected centers in the country and national facilitation agency (in the case of Nigeria), including discussing and reviewing of the implementation plans, annual workplans, annual budgets, IFRs, results (achievements of DLRs and fund utilization), procurement and FM annual audits, and environmental and social safeguards matters.

* Overseeing audits (be informed about the ToRs for the annual audit, and oversee follow-up on recommendations in the annual audit report presented by the selected centers in case the individual university audit oversight mechanisms are not adequately functional);
* Reviewing the adherence to national procurement and FM guidelines for each center(s);

1. Discussing at NSC meetings the alignment with national strategies and support the center(s) to foster linkages with relevant governmental bodies and line ministries;
2. Recommending changes to center-specific implementation plan(s) and decisions to be considered by the PSC; and
3. Monitoring of overall progress of the program with a special focus on delays, problems and bottlenecks (approval of progress reports, decisions on follow-up activities presented by the selected centers).
4. **Composition of the NSC** will include representation from the Ministry and/or agency responsible for higher education, which is expected to be the chair and convener, related Ministries of the selected centers, MoF and the selected centers. The NSC will have approximately five to seven members. This committee will meet semi-annually. The composition and ToRs for the NSC can vary between countries. The model ToRs are in the POM.
5. To participate in the NSC meetings, center representatives will pay for their own travel expenses throughout the project while the government representatives will be government financed. Similarly, NUC will pay for its own travel expenses through its own funds under Component 3 of the proposed Second ACE Impact. If staff from the RFU are attending such meetings, the RFU will cover their costs out of Sub-component 3.1 of the First ACE Impact Project financing. Minor logistical and review expenses for the preparation and facilitation of meetings of the NSC will be financed and managed by the centers. Such expenditures will be clearly identified. Capacity-building of NSC members can only be undertaken via the RFU.

**Project Steering Committee (PSC)**

1. The role of the PSC is to oversee and guide the project, ensuring that the PDO is achieved. The PSC will also be responsible for advocating for regional collaboration in higher education and will act as a liaison between the project and regional leadership as well as with the public at large. The RFU will support the PSC by serving as its secretariat. The PSC will meet in-person once a year at the Ministerial level and twice a year at the representative level. Virtual meetings at the representative level will also be held on an as needed basis. The full ToRs are provided in the POM.
2. Unless otherwise stated, the key tasks of the PSC listed below will be conducted by the representative level. The key tasks of the PSC are:
3. Make strategic decisions to ensure the continued coherence between the program support and sector and regional development priorities (by Ministerial level PSC);
4. Sign-off on the call for proposals, process of project evaluation and other aspects of the project design;
5. Consider the findings and recommendations of the independent evaluation committee (as facilitated by the RFU) in making the final selection of the ACE centers and validation of the Emerging centers, while ensuring thematic, geographic, linguistic and gender balance (by the Ministerial level PSC);
6. Make decisions (acceptable to the World Bank) concerning deviations from the project support documents (including the project appraisal document (PAD) and POM);
7. Review and guide the overall progress of the project including: (a) a special focus on the delays, non- performance of centers, and any other problems and bottlenecks that may inhibit the achievement of the PDO; and (b) a review of progress and approval of the work plan, financial reports and decisions on follow-up activities presented by the RFU;
8. Review progress during implementation in incorporating of cross-cutting interventions as identified in the project documents, e.g. gender and diversity and provide implementation support during visits to the participating institutions on these issues;
9. Facilitate national, regional, and international networking and outreach activities for the project as a whole;
10. Review the extent and performance of ACE Impact partnerships (both academic and sectoral collaborations); and
11. Oversee audits of the RFU (approval of the annual audit, overseeing follow-up on recommendations in the annual audit report presented by the RFU).
12. Composition of the PSC will be such that it will include representation from each country participating in the project. The PSC was constituted by government and regional stakeholders in consultation with the World Bank as part of project preparation. There will be a two-level PSC: Ministerial and government representative levels. The Ministerial-level PSC will consist of Ministers in charge of higher education and ECOWAS. The Ministry in charge of higher education may assign an ACE Impact focal point who will be a country representative supporting the representative-level PSC member.
13. The representative-level will include the following members:
14. Representation of government/Ministry of Higher Education of each participating country (11 representatives)
15. Representation by academic experts of international stature representing the disciplines covered under this program (two academicians)
16. Representatives from the private sector (one private sector representative)
17. Representatives of the centers (one Vice chancellor representing the selected centers)
18. Representative from ECOWAS (one)
19. Representative from UEMOA (one)
20. The procedures of the PSC meetings will be determined by the Committee itself. Similar to the processes utilized by the ACE I Project, each meeting will be chaired by a Chairperson who will be either the Minister or the representative (depending on the level of the meeting) on the PSC from the country hosting the meeting. The PSC will make decisions on a majority basis. Decisions of the PSC are subject to the project objective, POM and FAs as agreed between the World Bank, the governments, AAU and ECOWAS. The PSC will be able to co-opt external members for advice as it sees fit.
21. The PSC will have an appropriate budget under Component 3 of the First ACE Impact Project, from the RFU, to perform its functions. Members of the PSC will all have reasonable travel expenditures covered and will receive per diem but will not receive honorariums.

**Other Government-level Arrangements**

1. Government ownership is critical to the success of the ACE Impact centers. Active government participation is needed from preparation through the implementation of the project. Each participating government (represented by the MoF or its equivalent), will sign an FA with IDA.
2. The government will specify the center as the implementing entity and subsequently sign a PFA (subsidiary agreement) with each ACE host university and the center. This PFA will define the responsibilities of the institution, including fiduciary and reporting arrangements as well as the terms and conditions for its operation, including engagement with partner institutions.
3. The MoF will ensure government commitment and ownership of the project as well as making sure the funding channels for the DLIs are set up accordingly. The MoF will also ensure the financial set-up for the DLI approach is adequately functioning with a commitment to open a budget line for the Second ACE Impact Project up to the amount agreed in the FA and in the PFA. (Details on the disbursement arrangements are provided below in the FM section of Annex 2, part A).
4. The Ministry in charge of higher education in each respective country will ensure that there is strong project ownership, ensure alignment between the project and the national higher education policies, and promote active partnership among the country’s higher education institutions and the ACE Impact centers.
5. Other line ministries, such as Ministry of Agriculture, Mining or Health, depending on the focus of the selected ACE in the country will seek to promote sectoral impact of the project, facilitate partnerships, support project activities, and align the proposed Second ACE Impact Project with national strategy. This will include facilitating linkages and communication regarding the human resource and skills needs of the sector as well as the priorities for applied research.

**Partners**

1. During project preparation, several potential partners were consulted. The proposed project will continue to nurture several of these partnerships that have the strongest synergies. See Table A1.2 for the list of partners.

**TableA1.2. *Stakeholders Consulted During Project Preparation***

|  |  |
| --- | --- |
| **Stakeholders** | **Activities** |
| **In-Country Stakeholders**   * National governments (Ministries, agencies in charge of Higher Education and Research, line ministries) * Universities (management, faculty & students) and national research institutes | * Consultations on overall project * National Workshops (10 out of 11 countries) * Four PSC meetings * ACE I Project regional workshop and ACE Impact Regional Bootcamp |
| **Regional Bodies**   * ECOWAS * AAU * UEMOA | * Consultations on the project * ECOWAS Technical and Ministerial Meetings * Consultations with AAU on regional facilitation |
| **World Bank**   * GPs and Office of the Chief Economist * Country Management Units (CMUs) | * Consultations on ToRs for Pre-Identified Regional Development Challenges (10 GPs) * Consultations on national participation and IDA allocation |
| **Development Partners**   * AFD and IRD (France) * IDRC (Canada) * BMBF (Germany) | * Consultation on AFD Co-financing * Consultations on project design * Consultations on partnerships post selection |
| **Research Funding Agencies**   * ANR, CNRS (France) * DAAD, DFG (Germany) * UKRI (UK) * NSF (US) * Japan Society for the Promotion of Science (JSPS) and Japan Science and Technology Agency (JST) (Japan) | * Workshops and consultations on project design and partnerships with international academics and industry |
| **Industry/Sectoral Players**   * ICT-oriented companies (Intel, Microsoft, Orange, Digital skills, Ericsson, Vodafone) * Solar energy companies * West African Health Organization (WAHO); * West African Power Pool (WAPP) * National Instruments * Royal Academy of Engineers (UK) | * Consultations on skills and applied research needs within various sectors * Discussions on potential areas of collaboration |

|  |
| --- |
| **ANNEX 2: Financial Management, Disbursements and Procurement** |

1. **Financial Management and Disbursements**

***Financial Management - Institutional Arrangements***

1. **At the national level, each selected higher education institution will implement its own ACE Impact sub-project.** Each Second ACE Impact host institution will house an ACE Impact implementation team that will manage both the technical and the fiduciary aspects of its own sub-project. At the regional level, AAU, in its role as the RFU will receive a grant for overall project facilitation as indicated under Component 3. AAU will be responsible for all fiduciary aspects associated with the use of the grant it will receive. In addition, under Component 3 of the proposed project, the NUC and the PCU-Gambia as indicated earlier will also receive funding for national level coordination of the centers in Nigeria and The Gambia. Sub-component 2.2 will be implemented by *icipe,* which is a regional coordination unit implementing RSIF. The FM action plan and mitigating measures are reflected in Table A 2.3.
2. **Assessments of the FM capacity of each of the implementing entities (the ACE Impact centers, *icipe,* AAU, NUC and the PCU-Gambia) in the participating countries have been completed. The detailed summaries are provided below.**
3. The FM assessments for AAU and *icipe* were conducted as part of the preparation of the First ACE Impact Project and the Africa RSIF for Applied Sciences, Engineering and Technology Project (P165581), respectively, both of which are in their first year of implementation. These two entities meet the World Bank’s FM requirements.
4. ***NUC***
5. A FM assessment was conducted on the FM arrangements for the NUC with the objective of determining whether the implementing entity has acceptable FM arrangements in place that satisfy the World Bank Policy and Directive for IPF Operations. The FM team for NUC that would also be handling this project has gained experience from the implementation of ACE I. They have acquired reasonable training and experience in the World Bank’s FM and disbursement.
6. ***PCU-Gambia***
7. The overall FM risk of the project in The Gambia is substantial. The project will be implemented by the Ministry of Higher Education, Research, Science and Technology and the main beneficiary is GTTI which is being converted to a University. The GTTI FM capacity has been assessed to determine if their current FM arrangements are adequate to implement the project. Based on the FM assessment, it was determined that currently, the GTTI does not have adequate FM capacity and as such, the overall fiduciary aspects of the project during implementation will be the responsibility of the PCU-Gambia of The Gambia’s education sector. Considering the lack of readiness for implementation of the GTTI, the FM arrangements for the Second ACE Impact Project would be based on the existing arrangements in place at the PCU-Gambia under the IDA-funded Education Sector Support Program (ESSP) Project (P162890). The PCU understands the World Bank FM requirements and has experience in managing IDA-funded projects. In summary, it is proposed that the PCU shall be responsible for fiduciary tasks and will provide the needed fiduciary support to GTTI, for an initial two-year period, following which the GTTI will be reassessed to determine if it would have capacity to manage the fiduciary aspects of the project.
8. ***Selected Centers***
9. ***In Benin:*** The overall FM risk of the project in Benin is substantial. An FM assessment was conducted on the participating ACEs in Benin, all within the University of Abomey-Calavi. The centers are: (i) *ACE: Mathematical Sciences, Computer Science and Applications (CEA-SMIA) / Projet de Centre d’Excellence Africain en Sciences Mathématiques, Informatique et Applications; (ii) ACE: Water and Sanitation / Centre d’Excellence Africain pour l’Eau et l’Assainissement (C2EA)*. As an add-on to the project in Benin, the *College of engineering in Energy, Transport Infrastructures and Environment / Collège d’ingénierie en Énergie, Infrastructure des transports et Environnement (CoE-EIE)* will also receive funding under the colleges of engineering element of the project. The two ACEs (CEA-SMIA and C2EA) and CoE -EIE will each have their own dedicated implementation teams responsible for coordinating the day-to-day implementation of the Second ACE Impact Project in Benin, including FM, procurement, M&E and other related project activities. Although the reimbursable account of the add-on CoE-EIE will be linked to either the CEA-SMIA or C2EA center, CoE-EIE will also have its own implementation team.
10. CEA-SMIA is a Renewal ACE and therefore familiar with the World Bank’s FM requirements. CEA-SMIA’s FM performance was rated satisfactory and the FM risk was rated moderate, following the most recent ACE I mission. The current FM staffing is adequate and consists of two civil servants, one assigned as the Center’s Financial Management Specialist (FMS) and the other as the Accountant. C2EA and CoE-EIE are two operational units of the University of Abomey-Calavi which are staffed with well qualified FM personnel familiar with budgetary accounting, but who have no previous experience with IDA-funded projects. The University has also a financial manual of procedures which is currently being updated to include relevant accounting procedures and specificities on disbursement mechanism under World Bank financing.
11. ***In Niger:*** The FM risk rating for Niger is substantial. At the national level, the project will be implemented by the three participating centers: (i) Pastoral Productions: Meat, Milk, Leather and Skins (CEA-CERPP); (ii)  Innovative Teaching/Learning of Mathematics and the Sciences for SSA (CEA-IEA-MS4SSA) both within the UAM; and the (iii) Emerging Center: Mining Environment (CE-Environnement Minier) within EMIG. Each participating center is responsible for its strategic planning, proposal preparation and implementation, fiduciary activities, M&E, and reporting, with support from its respective host university. In addition, the implementation support at the national level will be provided by the ACE NSC. In Niger, the NSC was established by order 0050/MESR/I/SG/DL of 19 March 2019 of the Ministry of Higher Education, Research and Innovation.
12. Each of the three participating centers will have the overall FM responsibility for the project-related activities it will be implementing. The overall FM risk for Niger is rated substantial because CEA-CERPP, CEA-IEA-MS4SSA and CE-Environnement Minier have not participated in a World Bank-funded project and do not have a computerized accounting system amongst other FM related issues.
13. ***In Nigeria***: The overall FM risk for the universities /ACEs in Nigeria has been assessed as substantial. The fiduciary responsibilities of the centers lie with the professionally qualified accounting staff posted from the bursary and internal audit units of the respective universities. The Renewal centers (centers from ACE I) include: OAU, Ile-Ife; UniPort; UniBen; Ahmadu Bello University, Zaria; Redeemers University; CDA Kano, and CEFTER-Markudi, NUC). The New centers now participating include: UniLag, University of Nigeria, Nsukka, LSU, CU, National Open University, FUTO, FUTMIN.
14. For the Renewal centers in Nigeria, the FM arrangements remain unchanged. The Center leaders are senior officers from the universities while the fiduciary responsibilities are managed by the project accountants from the respective university bursary departments and the internal audit departments. Similar institutional arrangements will be replicated for the New centers. The new universities have been assigned professionally qualified accountants from the university bursary and internal audit departments to the ACE centers. Where necessary, these officers may be relieved of other university assignments for the period of the project, to enable them concentrate on the ACE Impact related activities. The center leaders are senior officers from the university. The relevant team members of the New centers would require similar FM -elated trainings and exposure provided to the Renewal centers.
15. ***In Togo****:* The overall FM risk of the centers in Togo is rated substantial. To support the implementation of the Second ACE Impact Project, an FM assessment was carried out on the following participating ACEs in Togo: *Poultry Science (CERSA) / Centre d’Excellence Régional sur les Sciences Aviaires (CERSA), ACE: Power Management / Centre d’Excellence Régional pour la Maîtrise de l’Electricité (CERME), and the ACE: Sustainable Cities in Africa (DOUNEDON) / Centre d’Excellence Régional Villes Durables en Afrique,* all within the UL*.*
16. The proposed project in Togo will have three dedicated implementation teams: (i) the same CERSA team currently in charge of ACE I, and (ii) the two new teams to be set-up at CERME and ACE-DOUNEDON These implementation teams will be responsible for coordinating the day-to-day implementation of the project, including FM, procurement, M&E and other related project activities. CERSA is a Renewal center and, therefore, has experience with the World Bank’s FM requirements. CERME, and the ACE-DOUNEDON are not familiar with IDA procedures for reporting, disbursement arrangements, and auditing and do not have qualified FM staff in place. In addition, CERME, and the ACE-DOUNEDON do not have adequate FM tools: specifically, accounting software, and manuals of procedures. To help in strengthening the fiduciary environment, it has been agreed that the updated version of the Financial Accounting Manual of CERSA will be adopted by these two New centers during implementation.

***Planning and Budgeting Arrangements***

***(i) NUC***

1. Budget preparation is detailed in the Financial Procedures Manual. Budgeting is coordinated by a budget committee which is responsible for tracking financial performance. The capacity of the accounting staff to fulfill budgeting needs of the project is adequate.

***(ii) PCU-Gambia***

1. The budgeting process from elaboration to execution and control will be clearly defined in the manual of procedures including FM arrangements and the budget will be reviewed and adopted by the NSC before the beginning of its execution. Annual draft budgets will be submitted for the World Bank’s no-objection before adoption and implementation and no later than November 30 of each year. Periodic monitoring of budget execution and variance analysis will be prepared by the Project coordination Unit and included in the quarterly interim financial reports.

***(iii) Selected Centers***

1. **For all participating centers, the annual budgets and work plans will be prepared by qualified staff in their corresponding finance departments in line with applicable budgeted preparation guidelines in each center’s respective FM Manuals and/or relevant government guidelines.** The annual budgets and work plans will be approved by the relevant authority in each host institution (e.g., Budget committee, University Council) no later than November 30 of the preceding year. The cash budget will include the figures for the year and will be analyzed quarterly. The cash budget for each quarter will reflect the detailed specifications for project activities, schedules (including procurement plan), and expenditure on the project activities scheduled respectively for the quarter. All annual cash budgets will be sent to the Task Team Leader at least two months before the beginning of the calendar year. Accounting information systems will be upgraded or acquired to include a budget monitoring module to enable management identification and follow-up as well as action on budget to actual variances which will be reported in the semi-annual IFRs.
2. ***In Benin****:* CEA-SMIA, C2EA, and CoE-EIE will prepare annual budgets based on their work plans, submit them to their Audit Committee for review and approval and thereafter to the World Bank for no-objection not later than November 30 of each year preceding the year the work plan should be implemented. The budgets will follow budgeting guidelines in the FM Manuals and project implementation manuals applicable to each implementation team.
3. ***In Niger:*** The annual budgets and work plans process will be clearly defined in the respective FM procedures manuals, and the budgets will be reviewed and approved by the NSC created for the Second ACE Impact Project in Niger, before the beginning of the year i.e. not later than November 30 each year. The approved annual budgets of the project should be, at a minimum, monitored on a quarterly basis against actual expenditure by CEA/CERPP, CEA/IEA-MS4SSA) and EMIG. The budgets variances will be adequately explained and justified through the semi-annual IFRs to be prepared and submitted by CERPP, MS4SSA and EMIG separately for their respective activities.
4. ***In Nigeria*:** The Project Accountants with guidance from the center leaders will be taking the lead in preparing the centers’ budgets. On an annual basis, the Project Accountants in consultation with key members of the centers will prepare the budget for the fiscal year based on the approved work program. The planning and budget arrangements are considered adequate. The Renewal centers have been submitting their work plans as required under ACE I and will continue to do so under the Second ACE Impact Project. The New centers will follow a similar process. The project accountants will prepare the budget/disbursement plan from the approved work plans under the guidance of the center leaders. Detailed procedures for planning and budgeting are documented in the Financial Management Manual. The annual budgets and work plans will be approved by the relevant authority in each host institution (e.g., Budget committee, University Council) no later than November 30 of the preceding year.
5. ***In Togo****:*CERSA, CERME, and the ACE-DOUNEDON will prepare annual budgets based on their work plans and thereafter submit them to the World Bank for no-objection no later than November 30 of each year preceding the year the work plan should be implemented. The budgets will follow budgeting guidelines in the FM Manuals and POM applicable to each implementation team.

***Accounting Arrangements***

1. ***NUC***
2. IDA funds will be accounted for by the Project on a cash basis. This will be augmented with appropriate records and procedures to track commitments and to safeguard assets. The chart of accounts should be prepared to reflect various project components, to facilitate the preparation of relevant monthly, quarterly, semester and annual financial statements. Annual financial statements will be prepared in accordance with relevant International Public Sector Accounting Standards (IPSAS) using a computerized accounting system. The NUC is using SAGE Accounting Software and this software will be upgraded and used to support implementation. In terms of staffing, the project has adequately qualified accounting and internal audit staff who have experience in managing IDA-funded projects and will be able to handle the fiduciary responsibilities of the project.
3. ***PCU-Gambia***
4. Within the PCU-Gambia, the FM officer is responsible for ensuring that all accounting book keeping, recording and preparation of financial reports are done and submitted to stakeholders. Our assessment notes, that presently, the FM officer is overloaded with work and would require additional training and so it is recommended that prior to implementation, an additional FMS shall be recruited, on ToRs acceptable to the World Bank, to support the accounting department. In terms of accounting standards, The Gambia National standards will be the basis for preparing financial reports. Presently, the PCU-Gambia uses the TOMPRO accounting software and the system will be customized to support implementation within three months of project effectiveness. With regards to procedures and policy, the exiting PCU-Gambia manual will be updated and revised to comply with the specifics of the project. These activities aimed at strengthening the technical capacity are outlined in the FM Action Plan in Table A2.3.
5. ***Selected Centers***
6. **Financial Management Manual**: The FM manual is essential as it documents the accounting and other FM arrangements that will be used for the project. For Renewal centers, each center will update its existing FM manual to include the proposed project. In the case of New/Emerging centers, each center would develop its FM manual detailing the FM and accounting procedures.
7. **Accounting staff**: These staff are essential as they will prepare accounts for the project. As implementing entities, each center will be required to recruit or assign a qualified and experienced accountant to the project. The implementing entities will need to recruit or assign accountants with qualifications satisfactory to the World Bank, within three months following effectiveness if they do not have the staff.
8. **Accounting Information systems**: Computerized accounting information systems are essential as they ensure efficiency in the preparation of accounts and avoid errors associated with manual systems and will facilitate (i) the budget preparation and monitoring; and (ii) the preparation of interim bi-annual financial statements and annual financial statements under a format acceptable to the World Bank.
9. ***Accounting basis*:** The accounting basis for each implementing entity is summarized in the Table A2.2 below.
10. ***In Benin*:**

* ***Financial Management Manual:*** CEA-SMIA’s existing FM Manual will be updated to include the proposed project and will be adapted to C2EA, and CoE-EIE as part of the requirements for achievement of DLI 1 on Institutional readiness.
* ***Accounting staff:*** Within three months after effectiveness, CEA-SMIA, C2EA, and CoE-EIE will each recruit an experienced Accountant with qualification acceptable to the World Bank who will work under the oversight of the civil servant assigned by the University of Abomey-Calavi as the Project’s FMS. The World Bank will also enhance the skills of the existing staff by training them in World Bank FM and Disbursement requirements/procedures***.***
* ***Accounting information systems:*** CEA-SMIA’s current accounting software SUCCESS with multi-projects, multi-sites, and multi-donor characteristics is functioning properly and will be deployed within three months after effectiveness at C2EA and CoE-EIE.
* ***Accounting standards:*** Each center will use SYSCOHADA accounting standards, which are commonly used among West African Francophone countries.

1. ***In Niger:***

* ***Accounting standards*:** The current accounting standards in use in West and Central African Francophone countries for on-going World Bank-financed projects will be applicable i.e., SYSCOHADA. Project accounts will be maintained on an accrual basis, supported with appropriate records and procedures to track commitments and to safeguard assets. Annual financial statements will be prepared by each participating center in accordance with the SYSCOHADA and World Bank requirements.
* ***Accounting staff:*** Regarding accounting staff, the assessment indicated that the three participating centers do not have appropriate FM staff in place to handle the handle the World Bank-funded projects. For this project, UAM will recruit a qualified and experienced Senior Accountant and an Accounting Assistant for its two participating centers that is CERPP and MS4SSA. EMIG will also recruit a qualified and experienced Accountant for its activities. The recruitment of these FM staff will be completed within 3 months of effectiveness.
* ***Accounting information systems:*** The three participating centers do not have an appropriate Accounting software. This has resulted in the use of Excel spreadsheets and manual record keeping in preparing financial reports for the other DPs’ projects that they are currently managing. To mitigate this risk, it was agreed that UAM and EMIG will acquire and install a computerized FM system with specifications acceptable to the World Bank. The accounting software to be procured would include the following modules to be integrated: budgeting, general accounting, cost accounting, reporting, M&E, fixed assets management, preparation of withdrawal applications, and tracking of disbursements by donors. The procurement and installation of a suitable accounting software is expected to be within three (3) months after Effectiveness Date.

1. ***In Nigeria:***

* ***Financial Management Manual***: The Renewal centers from ACE I will continue to use the existing manuals as reviewed. For the New ACEs, each center will prepare (if an FM manual does not exist) or update its existing FM manual to include the proposed Second ACE Impact Project. The FM manual is part of the requirements for achievement of DLI 1 under Institutional readiness In Nigeria, it was noted that all the Universities have fully complied with the use of National Chart of Accounts.
* ***Accounting staff:*** As implementing entities, unless a qualified and experienced accountant exists, each center will be required to recruit or assign a qualified and experienced accountant to the project within 3 months after effectiveness
* ***Accounting Information systems***: Computerized accounting information systems are essential as they ensure efficiency in the preparation of accounts and avoid errors associated with manual systems and will facilitate (i) the budget preparation and monitoring; and (ii) the preparation of interim bi-annual financial statements and annual financial statements under a format acceptable to the World Bank. For Nigeria, almost all the centers now have computerized accounting system using different accounting software except for the *Redeemer’s, Ahmadu Bello universities* who are at various stages in the computerization process. However, *NOUN and FUTMIN* rely on manual accounting systems. Covenant university, FUTO, Uniport, UniLag, LASU and UNN need to upgrade the university accounting software to capture their center activities

1. ***In Togo*:**

* **Financial Management Manual:** CERSA’s existing FM manual will be updated to include the proposed project and will be adapted to CERME, and ACE-DOUNEDON as part of the requirements for achievement of DLI 1 on Institutional readiness.
* **Accounting staff**: Within three months after effectiveness, each of the New centers: CERME, and the ACE-DOUNEDON will recruit a qualified and experienced FMS, and the UL will assign, within three months after effectiveness, two qualified and experienced civil servants as Accountants for each center, fully dedicated to the Project accounting and disbursement tasks.
* **Accounting information systems:** CERSA’s current accounting software TOM2PRO with mono-project features which is acceptable for the World Bank will be replaced by TOM2PRO software with multi-projects, multi-sites, and multi-donor characteristics and will be deployed within three months after effectiveness at each center level.
* **Accounting standards:** Each center will use the SYSCOHADA accounting standard.

***Internal Control and Internal Unit Arrangements***

**Internal Control and Audit**

1. ***NUC***
2. The NUC has detailed accounting policy and procedures manual (Financial Procedures Manual) in place coupled with an Internal Audit Manual. The internal auditors have attended trainings on Risk based Audit, however, an additional training is recommended as part of continuing professional education. The project has a NSC that is expected to have a fiduciary oversight function. There is proper segregation of duties. Adequate internal controls are in place.
3. ***PCU-Gambia***
4. The Education sector has an Internal Audit Unit staffed with an internal auditor from the Internal Audit Directorate of the MoF who is responsible for ensuring compliance to internal controls. The daily operations of the project will be guided by the POM, which will incorporate the FM procedures and the specificities of the project including the result-based financing. The Administrative and Accounting Procedures Manual of the University include a division of roles and responsibilities between stakeholders, a clear description of the approval and authorization processes in respect of the rule of segregation of duties. The PCU-Gambia does not have its own dedicated internal auditor and as part of the FM action plan, it is required that no later than three months after effectiveness, the Project shall recruit an internal auditor on terms acceptable to the World Bank. The assessments indicated that the internal audit and control environment for the respective ACEs is of varying degrees of efficiency; the role of the internal audit will be regularly assessed during supervision missions by the respective Country office FMS through reviewing their reports and management responsiveness to their findings. This is to ensure that the role is not limited to transactional reviews (pre-auditing) but adds value to the overall control environment through risk assessment. As part of the fiduciary responsibilities during implementation, the respective internal auditors will be expected to undertake period risk assessments and process and transactions reviews and share such reports with the World Bank during missions.
5. ***Selected Centers***
6. ***In Benin:*** The internal control policies and procedures for C2EA, and CoE-EIE will be documented in the updated version of CEA-SMIA’s current FM Manual. This approach is acceptable under the project. The University of Abomey-Calavi will recruit within three months after effectiveness, an internal auditor, with experience and qualifications acceptable to the World Bank, fully dedicated to the CEA-SMIA, C2EA, and CoE-EIE internal audit tasks. The Inspectorate General of Finances (*Inspection Générale des Finances*- IGF) should provide internal audit oversight based on the internal audit arrangements designed for CEA-SMIA under the ACE I Project and its legal mandate. However, each implementing entity will adopt an internal audit charter and internal audit manual as well as an institutional risk mapping to ensure that the audits are done semi-annually using a risk-based approach. These semi-annual internal audit reports will be reviewed by the World Bank during FM supervision mission to ensure the adequacy of the control environment and note any risk identified by the auditors.
7. ***In Niger***: All the participating centers will be required to develop or update their existing Financial Procedures Manual to reflect their specific Second ACE Impact Project. For UAM, an FM manual will be developed and adopted for both CERPP and MS4SSA as part of the requirements for achievement of DLI 1 on Institutional readiness. The manual will include FM procedures for the project and will document, explain and describe work processes, information flow, authorization and delegation of authority, timing, segregations of duties, auto and sequential controls, compliance with project objectives, micro and macro rules and regulations. In addition, as part of enhancing the control environment, an internal auditor will be recruited with ToRs acceptable to the World Bank and will provide support to both CERPP and MS4SSA. The internal auditor will be recruited within three (3) months of effectiveness. UAM which is hosting CERPP and MS4SSA does not have an internal audit unit within its organizational structure and neither does EMIG. Given the size of the activities to be managed by EMIG, the recruitment of an internal auditor is not required. Internal audit reports will be submitted to the World Bank every semester indicating risks and proposing recommendations to enhance project operational efficiency***.***
8. ***In Nigeria:*** Each ACE has detailed accounting policies and procedures manual along with an Internal Audit Manual. There is adequate segregation of duties. Most centers now have functional audit committees except for CERHI Benin, OAU ILE IFE and ACENTDFB that are still in progress of being set-up. The internal auditors have been trained on the risk-based audit, though additional training could still be provided. Each of the participating universities has tried to constitute anti-corruption and disciplinary committees to institute discipline and mitigate risk of fraud and corruption in the university, including the centers. All the New centers have accounting policies and procedures manuals as well as the Internal Audit Manuals. A review of these manuals indicated they are adequate and there is adequate segregation of duties. The universities also have Audit Committees except for CU, FUTO and NOUN. Centers will adopt internal reforms aimed at ensuring timely submission of IFRs and Internal audit Report, particularly Ahmadu Bello and BSU.
9. ***In Togo***: The internal control policies and procedures for CERME, and the ACE-DOUNEDON will be documented in the updated version of CERSA’s current FM Manual. These will be adequate for the project. The internal audit arrangements designed for CERSA under the ACE I Project should adequately be extended for CERME, and the ACE-DOUNEDON within three (3) months after effectiveness. However, each center will adopt an internal audit charter and internal audit manual as well as an institutional risk mapping to ensure that the audits are done semi-annually using a risk-based approach. These semi-annual internal audit reports need to be submitted to the World Bank within 45 days after the end of the semi-annual period.

***Audit Committees***

1. Audit committees are essential to ensure that audit issues are brought to high level attention and addressed. The committees are made up of non-executive members, including University Council members. Based on the ACE I implementation experience and the results of the FM DLI#3.3 in that project, some implementing entities have yet to have a fully functional audit committee. The existence of Audit Committees, or a formally constituted sub-group of the University Council with Council members to examine audits, is an element of good corporate governance to ensure management addresses audit issues. Therefore, this will be a DLR (within DLI 6) for the centers, to encourage them to improve on their governance arrangements. Internal auditors will be expected to report to them functionally and report administratively to the Head of the Institution e.g., Vice Chancellor or the Rector for the ACEs. A summary of the status of audit committees in the participating centers is provided below:
2. ***In Benin:*** CEA-SMIA has an audit committee which is essential in ensuring that management addresses issues raised by both internal and external auditors. It also provides independence to the Internal Auditor who can report to it from a functional perspective while reporting to management from an administrative perspective. CEA-SMIA’s audit committee arrangements will be reinforced and extended to C2EA, and CoE-EIE within three months after effectiveness.
3. ***In The Gambia:*** The assessment indicated that presently there is no functional audit committee within the GTTI and so as part of fiduciary strengthening it is proposed that the GTTI should establish a functional audit committee.
4. ***In Niger:*** Neither UAM nor EMIG has an audit committee and so will need to set up such a committee.
5. ***In Nigeria:*** All of the participating universities have Audit Committees except for UniBen, BSU, UniPort, Ahmadu Bello University, CU, FUTO, NOUN, FUTMIN and OAU that do not have Audit committees and so would need to set up Audit Committees within three months of effectiveness.
6. ***In Togo:*** CERSA has a functional audit committee which is essential in ensuring that management addresses issues raised by both internal and external auditors. It also provides independence to the Internal Auditor who can report to it from a functional perspective while reporting to management from an administrative perspective. CERSA’s audit committee arrangements will be extended to CERME, and ACE-DOUNEDON within three months after effectiveness.

***Governance and Anti-Corruption Arrangements***

1. To enhance transparency and accountability, and improve the fiduciary oversight functions within the Universities, each participating center will be supported to improve its governance arrangements. The activities to be undertaken to improve governance, some of which will be part of the FM DLRs to be achieved include, but are not limited to:

* Publish budgets, financial reports and audited financial statements related to the project and for the institution on the websites to enhance transparency and accountability. This will be encouraged through an annual disbursement (DLR#6.3) linked to the online publication of these FM reports.
* Working with the Universities oversight institutions such as Audit Committee, and Governing Boards, put in place where appropriate an independent mechanism which will allow the reporting of issues related to suspected malfeasances, fraud, corruption, misprocurement and other acts which pose a risk to the use of project funds for the intended purposes.

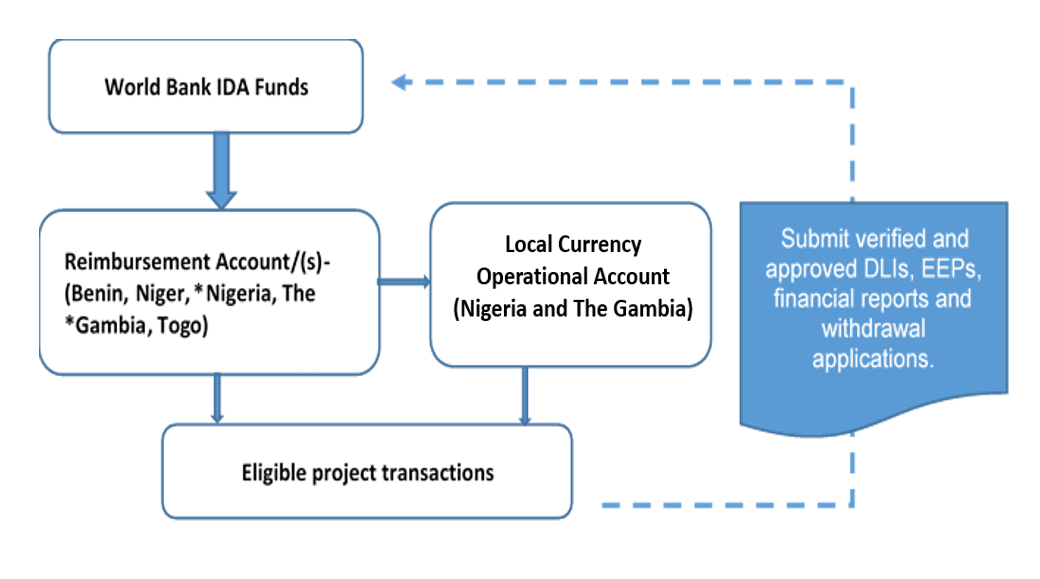
***Disbursement Arrangements and use of funds***

1. Proceeds of the financing will follow the standard World Bank procedures for IPF, for use by the Recipient for eligible expenditures as defined in the FA. The design features of the proposed project cater to the requirements of a hybrid funding structure, all within the IPF instrument of the World Bank. This basically involves a results-based (DLI/DLR) financing approach for project financing across Components 1 and 2.1. In addition, some funding will be provided to the coordinating agencies, that is, the AAU, the NUC and the PCU-Gambia under Component 3, based on the traditional investment financing approach to support their activities.
2. The proposed operation will allocate to the respective countries and their selected implementing centers in the form of IDA credits and grants (see Table 4 in the main text for the terms of the IDA funding by country). Proceeds of the financing will be used by the centers for payments of eligible expenditures as defined in the FA and further detailed in their respective Annual Work Plans & Budgets and Procurement Plans. Disbursement arrangements have been designed in consultation with the respective Recipients after considering the assessments of the Implementing Agencies’ FM capacities and anticipated cash flow needs of the operation. It must be noted that for the RBF Components using DLI/DLR there will be no advances into any Designated Accounts (DA). Centers will only receive funding on satisfactory achievement of results as verified by the RFU. In view of this, the Centers are not required to open DAs to support implementation.
3. ***In Benin:*** CEA-SMIA, C2EA and CoE-EIE will each open a **Reimbursement Account** at the Central Bank of West African States (*Banque Centrale des Etats de l’Afrique de l’Ouest*, BCEAO) to receive funds from the World Bank. The funds will be released to an Operational Account to be opened in a reputable commercial bank. All the Reimbursement Accounts will be denominated in CFAF.
4. ***In Gambia:*** The PCU-Gambia on behalf of the GTTI, will open and maintain a US dollar Reimbursement Account into which proceeds of the credit shall be paid once the center achieves the respective DLRs as per their FA. These earned funds, will subsequently be transferred to the GTTI for use by the center.
5. ***In Niger*:** The participating ACEs - CEA/CERPP, CEA/IEA-MS4SSA and CEA/Environnement minier, will be required to open separate **Reimbursement Account** to receive the proceeds of the funding once they meet the respective DLRs as per the FA.
6. ***In Nigeria:*** The NUC shall be responsible for managing funds allocated to them under Component 3 and in addition serve as the “fund management agency” for the participating ACEs in Nigeria. Disbursements will continue with the traditional IPF disbursement mechanism and will be in line with the Disbursement Guidelines (dated February 2017). The NUC will continue to submit monthly withdrawal applications with supporting documentation using **report-based disbursements** (IFRs) evidencing the use of advances for eligible project expenditures*.* The proposed arrangement is to have two types of bank account to support implementation i.e. (i) **single US dollar DA** account located at the Central Bank of Nigeria (CBN) (denominated in US dollars) to be used exclusively by NUC for Component 3 and (ii) In addition, to support the funds flow arrangements for the participating ACEs, NUC shall open and operate a separate **US dollar** “**Reimbursement Account**” on behalf of the ACEs. A Naira Account will also be opened for NUC and for each ACE in the CBN to facilitate the implementation of the project. The ACEs may receive direct transfers from the US$ Reimbursement Account to pay for eligible project activities as identified in the approved Annual Work Plans. On receipt of the earned US dollar equivalent of the DLR in the Reimbursement account, the NUC will instruct the central bank to convert the funds to naira to enable them transfer relevant amounts to the specific ACEs that earned the DLR, allowing them to settle eligible project expenditures. (Additional instructions on modalities to be incorporated in the revised POM).
7. ***In Togo:*** Bank Accounts: Given that the ACEs i.e. CERSA, CERME, and the ACE-DOUNEDON will be implementing the DLI/DLR components only, they will each open a separate **Reimbursement Account** in a reputable commercial bank acceptable to the World Bank, to receive funds from the World Bank under the project. All the Reimbursement Accounts will be denominated in CFAF.

**Modalities for Disbursements under RBF Components – Component 1 and Sub-component 2.1**

1. ***Results* Based Financing** - The total resource allocation to be implemented under the Results Based Financing approach using DLIs and DLRs is estimated at US$146 million (IDA and AFD financing) across Component 1 and Sub-component 2.1 of the project. In line with World Bank guidelines, for IPF with DLIs, there will be no advance but, the underlying principle will be, following project effectiveness to disburse, funds to the respective centers only upon satisfactory achievement of the DLI/DLR. As per the design, disbursements under these components will be measured and valued in monetary terms for each respective year through a set of identifiable and measurable DLRs over the implementation period. These DLRs are considered significant indicators of performance that will influence behavioral and policy reforms required for achieving visible outcomes in the higher education sector. For each Sub-component (1.1, 1.2 and 2.1), the respective DLIs have been defined into a set of achievable DLRs.
2. Satisfactorily achieving the defined DLRs as identified in the Results Framework and Monitoring table and in the Financial Agreement will constitute the primary basis for triggering credit disbursements under the project. The DLRs have been individually priced, and as such the eligible disbursement amount will be the sum of the achieved DLRs multiplied by the unitary monetary value (price) as per the disbursement schedule. It must be noted that while noncompliance with a DLR in a period will result in funds associated with that DLR being withheld, disbursement associated with the achievement of other DLIs will not be affected. The exception is that results related to DLI 1 must be achieved and verified before funds for any other DLI achieved can be disbursed.
3. Where achievement of a DLR cannot be verified, an amount equivalent to the DLR value will be withheld or considered as undocumented and outstanding obligation on the Recipient. This amount will be paid at any later date, during project life, and at the discretion of the World Bank’s task team when such achievement can be verified. The task team may consider that a later achievement of the DLR performance would not qualify for disbursement against the unmet DLR if it determines that the on-schedule (timely) achievement of the DLR is critically fundamental to achieving the overall objectives of the project. A schedule of the DLI/DLR matrix with the indicative DLR values is included in Table 7 (of the main text).
4. Additional details of the verification protocols and the independent verification process shall be documented in the POM. (See Figure A2.1 below for the funds flow diagram for the centers).

**Figure A2.1. *Funds Flow Diagram for Component 1 and Sub-component 2.1***



*Note: \*NUC shall open and operate a separate US dollar Reimbursement Account on behalf of the ACEs. Also, the PCU-Gambia on behalf of GTTI, will open and maintain a US dollar Reimbursement Account.*

**Eligible Expenditure Program (EEP)**

1. The overall government program of expenditures to be supported under the components is defined as the set of defined eligible expenditures. The EEPs will consist of salaries, scholarships and operating costs of each university and participating ACE incurred by the Recipient as described in the FA. The World Bank Guidance Notes on IPFs with DLIs dated April 2018, World Bank Policy and Procedures for IPFs, apply to this project. Consistent with IPF Policy, the World Bank ensures the efficiency of any expenditures it finances. In the case of salaries, the World Bank will ensure that there are adequate accounting systems and controls are in place for personnel management.
2. The allocated amounts for the DLIs will vary from center to center but in all cases should be less than the overall amount of the EEPs. The World Bank project team will ensure that the eligible expenditure amount, as ascertained in the EEP Statement that will form part of the IFR submitted for disbursement, exceeds the DLR allocated amount. Where the EEPs for a reporting period are less than the total value of DLRs earned within the reporting period, disbursement shall be limited to the value of the verified EEPs.
3. As part of its reporting, each university will prepare semi-annual Budget Execution Reports (EEP Spending Reports) and make them available to their respective ACE Impact center fiduciary staff for preparation of the EEP Statement which will be incorporated into the IFRs and used to monitor implementation progress of the EEPs. Such EEP would be verified by the independent verification agency as part of the documentation for achieving DLRs. The EEP Statements will be audited annually by the external audit firm as part of the Project Financial Statement Audit to confirm that EEPs were incurred under the agreed budget lines and are eligible for World Bank financing. The audited EEPs will be submitted to the World Bank.

**Documentation under RBF Components**

1. It is expected that on a half-yearly basis, each center will provide satisfactory documentary evidence indicating the achievement of the DLR as per their FAs. To document results the following are required (i) acceptable interim IFRs); (ii) EEP Spending Reports; and (iii) evidence of independent verification of the set of DLRs for that specific year/period which have been achieved. These reports will then form the basis of documenting and used to determine the earned amount to be transferred to the Reimbursement Account.

**Funds flow and disbursement arrangementsandmodalities for disbursements under Non- RBF components**

1. Other than RBF-based disbursement (under Component 1 and Sub-component 2.1), all other components will be implemented under the principles of traditional IPF arrangements using either transaction-based arrangement (SoE) or report-based disbursement arrangements (IFR) depending on the specific country assessment. The AAU and NUC shall adopt the report-based disbursement (IFR), whilst the PCU-Gambia will use SoE.

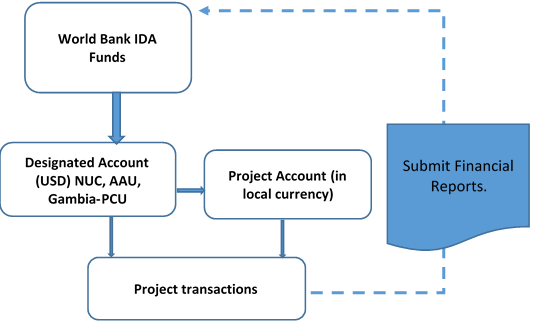
**AAU and NUC**

1. With the report-based approach, the allocated resources for AAU and NUC will be advanced to the Project under the DA based on an approved six-monthly forecast of expenditures and replenished quarterly for further periods of six months using IFRs. The IFRs (including the ‘procurements subject to prior reviews’ and ‘DA reconciliation statement’) will serve as the basis for requesting for advances and for documentation. The initial disbursement will be based on the consolidated expenditure forecast for six months, subject to the review and approval, by the World Bank Task Team Leaders (TTLs) and FMS. Further replenishments of the DA will be done quarterly based on the forecast of the net expenditures for the subsequent half-year period. See Figure A2.2 for the funds flow diagram for the AAU and NUC funds flow diagram.
2. Subsequently and on a quarterly basis the Project Accountant shall request for financial reports and other documents evidencing payment of eligible expenditure paid from the local currency Project Accounts and use same to prepare a consolidated Financial Report for submission to the World Bank and other stakeholders. Supporting documentation will be requested along with withdrawal applications as specified in the Disbursement and Financial Information Letter (DFIL)issued for the project. This will comprise summary reports (Interim Financial Reports) for payments made by the Recipient from the DA and requests for reimbursements for eligible expenditures. Copies of original documents or records shall be requested only for certain categories of expenditures subject to prior review as specified in the DFIL.

**The Gambia**

1. Disbursements for Component 3 which will be managed by the managed by the PCU for overall project management and coordination shall be transactions-based. The World Bank will disburse loan proceeds to the MoF into a DA denominated in US dollars, maintained at the Central Bank of The Gambia for Component 3.
2. Disbursements would be transactions based whereby withdrawal applications will be supported with SoE. Overall disbursement arrangements will follow standard disbursement policies and procedures established in the Disbursement Guidelines for IPF dated February 2017, and in the DFIL of the Project. (See Figure A2.2 for the funds flow diagram for the PCU-Gambia’s funds)
3. The authorized signatories of each participating country will sign and submit withdrawal applications electronically through the World Bank’s Client Connection website.

**Figure A2.2. *Funds Flow Diagram for Component 3***

****

**icipe**

1. Under Sub-component 2.2, funds will be disbursed against the submission of reports and confirmation by the implementing entity of the scholarship fund (General or Permanent Fund) that all conditions precedent to the disbursement of the funds have been met pursuant to agreements signed between the participating countries and the implementing entity of the Funds, icipe, will ensure funds are allocated to the scholarship window. See figure A2.3 below for the funds flow diagram for icipe.

**Figure A2.3. *Funds Flow Diagram for Sub-component 2.2***



**Country Allocation (IDA Sources only)**

**Table A2.1. *Summary of Country IDA allocations***

|  |  |  |  |
| --- | --- | --- | --- |
| **Country/**  **Organization** | **Source of Funds** | | |
| **Total Project Cost** | **IDA Credit** | **IDA Grant** |
| Benin | 6 | 2 | 4 |
| The Gambia | 12 | - | 12 |
| Niger | 15 | 5 | 10 |
| Nigeria | 75 | 75 | - |
| Togo | 18 | 12 | 6 |
| AAU (RFU) | 5 | - | 5 |
| **Total** | **131** | **94** | **37** |

1. The specific disbursement categories per country can be found in the FA for each of the respective countries and AAU If ineligible expenditures are found to have been made from the DAs, the Recipient will be obligated to refund the amount in question, and IDA will have the right to suspend disbursement of the funds if reporting requirements are not complied with as provided for in the FA. The World Bank’s FM team will periodically assess the adequacy of the FM systems and this will form the basis of any change in disbursement methods. The authorized signatories of each participating country will sign and submit withdrawal applications electronically through the World Bank’s Client Connection website. Further details on disbursement arrangements will be provided in the DFIL.

***Financial Reporting Arrangements***

1. In line with the World Bank’s FM guidelines, all participating centers and the coordinating agencies (AAU, NUC and the PCU-Gambia) will be required to prepare and submit quarterly IFRs to account for activities funded under this project. The respective Project Accountants or Heads of Accounts within the centers and coordinating agencies are responsible for preparing and submitting acceptable IFRs.
2. **Unaudited interim financial reporting (IFR).** For the regional (AAU) and the national (NUC and the PCU-Gambia) implementation entities, quarterly unaudited IFRs will be submitted no later than 45 days after the end of the quarter. The IFRs will be designed to provide relevant and timely information to the project’s management on all Second ACE Impact Project related activities implemented by these entities. The formats and contents of the IFR were agreed on between the World Bank and the regional and national implementing entities during negotiations. These reports should show clearly and, at a minimum, include:
3. A statement of sources and uses of funds showing the use of funds by components as per the PAD
4. A statement of sources and uses of funds showing the expenditure by category as per the FA
5. A budget variance report comparing the utilization of approved budget against the expenditure
6. A DA reconciliation statement including a cash forecast (for AAU, NUC and the PCU-Gambia)
7. Any other report that shall be required to provide further and relevant information on project expenditure including the EEP Spending Report for the RBF components (Component 1 and Sub-component 2.1)
8. All Second ACE Impact centers (New, Renewal and Emerging) will be required to prepare and submit semiannual unaudited IFRs to report on activities funded under the project, that are acceptable to the World Bank, no later than 45 days after the end of semester. The EEPs, will be reported semi-annually for each center, using a revised and improved IFR template (building on the ACE I Project IFR template). Further, the EEPs will be audited annually through the external financial audits. The revised IFR template for the centers will include an EEP Statement verified by each center’s Internal Audit unit, reflecting a standardized reporting of the EEPs in addition to building on the ACE I Project experience.
9. All implementing entities will prepare annual financial statements within three months following the end of the financial year in accordance with consistently applied accounting standards acceptable to IDA. Thereafter, all the implementing entities will be responsible for ensuring their reports are audited and submitted to IDA within six months after the end of the financial year.

***External Audit Arrangements***

1. All audits will be carried out in accordance with International Standards on Auditing (ISA) issued by International Federation of Accountants or International Standards for Supreme Audit Institutions issued by the International Organization for Supreme Audit Institutions. Depending on the circumstances in each center, the audit may be done by the Supreme Audit Institution or where that is not practical the audit will be done by a private audit firm. In situations where a private audit firm is undertaking the audit, it is required that the firm is recruited in line with World Bank Procurement Guidelines to ensure competitive selection. In this regard, the ToRs will be reviewed and cleared by the World Bank. Irrespective of the entity undertaking the audit, the centers must ensure all EEPs (and ACE investments) are audited. External auditors will be appointed within six months after project effectiveness for each center. Audit reports together with management letters must be submitted to the World Bank within six months after the end of the respective government’s fiscal year. In accordance with World Bank Policy on Access to Information, the Recipient is required to make its audited financial statements publicly available in a manner acceptable to IDA. Following the World Bank’s formal receipt of these statements from the borrower, the World Bank also makes them available to the public. Contributions to the scholarship fund (RSIF) will also be separately audited as part of the World Bank-funded RSIF Project. A summary of the audit arrangements for the respective ACEs in each country is included in Table A2.2 below.

**Table A2.2. *Summary of Accounting, Banking and External Audit Arrangements for All Centers Supported Under the Second ACE Impact Project***

|  | **University/National Coordination Unit** | | **ACE** | **Accounting Standard** | **Accounting Basis** | **Auditor** | **Audit Standard** | **Audit Reporting Frequency** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Nigeria** | | | | | | | | |
|  | Redeemers University | | ACE: Genomics of Infectious Diseases (ACEGID | National Accounting and Auditing standards | Accrual | Private | NAS | Annual – due not later than six months after FY |
|  | Ahmadu Bello University | | ACE: Neglected Tropical Diseases and Forensic Biotechnology (ACENTDFB) | Public accounting standards | Accrual | Private | ISA | Annual – due not later than six months after FY |
|  | University of Benin | | ACE: Reproductive Health Innovation (CERHI) | Public accounting standards | Cash | Private | ISA | Annual – due not later than six months after FY |
|  | Bayero University, Kano | | ACE Dry Land Agriculture (CDA) | Public accounting standards | Accrual | Private | ISA | Annual – due not later than six months after FY |
|  | Benue State University | | ACE: Food Technology and Research (CEFTER) | Public accounting standards | Accrual | Private | ISA | Annual – due not later than six months after FY |
|  | Obafemi Awolowo Univ | | ACE: OAU ICT-Driven Knowledge Park (OAU-OAK) | National Accounting & Auditing standards | Cash | Private | NAS | Annual – due not later than six months after FY |
|  | Univ. of Port Harcourt | | ACE: Oilfields Chemicals Research (CEFOR) | Public accounting standards | Accrual | Private | ISA | Annual – due not later than six months after FY |
|  | University of Port Harcourt | | ACE: Public Health and Toxicological Research | Public accounting standards | Accrual | Private | ISA | Annual – due not later than six months after FY |
|  | Bayero University, Kano | | ACE: Population Health and Policy | Public accounting standards | Accrual | Private | ISA | Annual – due not later than six months after FY |
|  | Covenant University | | ACE: Covenant Applied Informatics and Communication | National Accounting & Auditing Standards | Cash | Private | NAS | Annual – due not later than six months after FY |
|  | National Open University of Nigeria | | ACE: Technology Enhanced Learning (ACETEL) | Public accounting standards | Accrual | Private | ISA | Annual – due not later than six months after FY |
|  | Lagos State University | | ACE: Innovative and Transformations Stem Education (CITSE) | Public accounting standards | Accrual | Private | ISA | Annual – due not later than six months after FY |
|  | Federal Univ. of Technology, Minna | | African Centre Of Excellence for Mycotoxin and Food Safety | Public accounting standards | Accrual | Private | ISA | Annual – due not later than six months after FY |
|  | University of Lagos | | ACE: Drug Research, Herbal Medicine Development and Regulatory Science | Public accounting standards | Accrual | Private | ISA | Annual – due not later than six months after FY |
|  | Ahmadu Belo University | | ACE: Africa Centre Of Excellence on New Pedagogy in Engineering Education (ACENPEE) | Public accounting standards | Accrual | Private | ISA | Annual – due not later than six months after FY |
|  | Univ. of Nigeria Nsukka | | ACE: For Sustainable Power and Energy Development (ACE-SPED) | Public accounting standards | Accrual | Private | ISA | Annual – due not later than six months after FY |
|  | Federal Univ. of Technology, Owerri | | Centre Of Excellence in Future Energies and Electrochemical Systems | Public accounting standards | Accrual | Private | ISA | Annual – due not later than six months after FY |
| **Togo** | | | | | | | |  |
|  | Université de Lomé | | Centre D’excellence Regional Sur Les Sciences Aviaires (CERSA) | SYSCOHADA | Accrual | Private | ISA | Annual – due not later than six months after FY |
|  | Universite de Lomé | | Centre D’excellence Regional Pour La Maitrise De L’électricité (CERME) | SYSCOHADA | Accrual | Private | ISA | Annual – due not later than six months after FY |
|  | Université de Lomé | | Centre D’excellence Regional Villes Durables En Afrique (DOUNEDON) | SYSCOHADA | Accrual | Private | ISA | Annual – due not later than six months after FY |
| **Benin** | | | | | | | |  |
|  | Univ. Abomey Calavi | | Centre d’excellence En Sciences Mathématiques, Informatique Et Applications (CEA-SMIA) | SYSCOHADA | Accrual | Private | ISA | Annual – due not later than six months after FY |
|  | Université Abomey Calavi | | Centre d’excellence Africain Pour L’eau Et L’assainissement (C2EA) | SYSCOHADA | Accrual | Private | ISA | Annual – due not later than six months after FY |
|  | Université Abomey Calavi | | Collège d’Ingénierie en Énergie, Infrastructure des transports et Environnement (CoE-EIE) | SYSCOHADA | Accrual | Private | ISA | Annual – due not later than six months after FY |
| **Niger** | | | | | | | |  |
|  | Université Abdou Moumouni | | Centre d’excellence Régional Sur Les Productions Pastorales : Viande, Lait, Cuirs Et Peaux (CERPP) | International Financial Reporting Standards (IFRS) | Accrual | Private | ISA | Annual – due not later than six months after FY |
|  | Université Abdou Moumouni | | Innovative Teaching/Learning of Mathematics and the Sciences for SSA (CE-IEA-MS4SSA) | IPSAS | Accrual | SAI | ISA | Annual – due not later than six months after FY |
|  | l’Ecole des Mines, de l’Industrie et de la Géologie – EMIG | | Emerging Center: Mining Environment | IPSAS | Accrual | SAI | ISA | Annual – due not later than six months after FY |
| **The Gambia** | | | | | | | |  |
|  | The Gambia Technical Training Institute | | Centre for Science, Technology and Engineering for Entrepreneurship | SYSCOHADA | Accrual | Private | ISA | Annual – due not later than six months after FY |
|  |  |

***Financial Management Action Plan***

1. The FM risk mitigation measures will be developed upon completion of the FM assessments of the centers. Based on the ACE I Project experience, the FM-related DLIs (timely reporting, a functioning internal audit unit and audit committee, and publication of budgets, IFRs and audit reports) were effective in building FM capacity and addressing the FM risks and weaknesses identified at new ACE I centers. This operation will incorporate the same capacity-enhancing measures and put in place a robust implementation support to mitigate any potential FM weaknesses that may be identified for New centers.Furthermore, the selection criteria for the ACE Impact centers includes the World Bank’s minimum FM requirements such as, having a qualified accountant, an FM manual and systems that can account for and report on project funds; internal controls that will ensure funds are used for the purposes of the project and safeguard project assets; and arrangements are in place to ensures that project funds will be audited.

**Table A2.3. *Financial Management Action Plan***

|  | **Action** | **Due by** | **Responsible ACE** |
| --- | --- | --- | --- |
| **Country Specific Actions** | | | |
| **Nigeria** | | | |
|  | Update the FM Manual. | Within three (3) months after effectiveness | * NUC |
|  | Prepare or update the FM Manual. | Requirement for first disbursement (part of DLR#1) | * RU and Ahmadu Bello University * FUTMIN and NOUN * CU FUTO, Uniport, UniLag, LASU and UNN |
|  | Complete the computerization and upgrades of accounting system | Within three (3) months after effectiveness | * NUC * RU and Ahmadu Bello University * FUTMIN and NOUN * CU FUTO, Uniport, UniLag, LASU and UNN |
|  | Recruit a FM Consultant with qualifications and experience satisfactory to the World Bank to support the NUC in its fiduciary work. | Within three (3) months after effectiveness | * NUC |
|  | Recruit (where possible, second existing staff as) an accountant and internal audit staff with qualifications and experience satisfactory to the World Bank | Within three (3) months after effectiveness | * Ahmadu Bello, * BSU |
|  | Adopt internal reforms aimed at ensuring timely submission of IFRs and Internal audit Reports. | Within six (6) months following effectiveness | * NUC * Ahmadu Bello, BSU |
|  | Put in place a functional audit committee that will follow-up on audit recommendations to ensure they are addressed appropriately by management. | Within three (3) months following effectiveness | * UniBen, * BSU, UniPort, Ahmadu Bello University, CU, FUTO, NOUN, and OAU |
|  | Some New centers to submit the audit report conducted for fiscal year 2016 -2018 to the World Bank FMS for review | Within three (3) months after effectiveness | * FUTO, * Ahmadu Bello, UniPort, * Unilag, FUTMIN & Bayero Universities |
| **Togo** | | | |
|  | Prepare or update the FM Manual - Update CERSA’s current FM manual of procedures to be adapted to CERME, and ACE-DOUNEDON. (detailing the FM and accounting procedures) | Requirement for first disbursement (part of DLR#1) | * CERSA, CERME, and ACE-DOUNEDON |
|  | Recruit two FMS, with experience and qualifications acceptable to the World Bank, respectively for CERME, and the ACE-DOUNEDON. | Within three (3) months following effectiveness | * CERME, and ACE-DOUNEDON |
|  | Assign two civil servants as Accountants for CERME, and ACE-DOUNEDON. | Within three (3) months following effectiveness | * UL |
|  | Extend CERSA’s internal audit as well as its audit committee arrangements to CERME, and ACE-DOUNEDON | Within three (3) months following effectiveness | * UL |
|  | Replace CERSA’s current accounting software TOM2PRO with TOM2PRO software with multi-projects, multi-sites, and multi-donors’ characteristics and deploy same at CERME, and ACE-DOUNEDON level  for the management of the proposed project, | Within three (3) months following effectiveness | * CERSA, CERME, and ACE-DOUNEDON |
|  | Recruit an external auditor with ToRs acceptable to the World Bank | Within six (6) months following effectiveness | * CERSA * CERME, and ACE-DOUNEDON |
| **Benin** | | | |
|  | Update CEA-SMIA’s current FM manual and ensure it is adapted to C2EA, and CoE-EIE. | Requirement for first disbursement (part of DLR#1) | * C2EA, and CoE-EIE. |
|  | Recruit an internal auditor, with experience and qualifications acceptable to the World Bank, fully dedicated to the CEA-SMA, C2EA, and CoE-EPAC internal audit tasks | Within three (3) months following effectiveness | * CEA-SMIA, C2EA, and CoE-EIE |
|  | Recruit three Accountants, with experience and qualifications acceptable to the World Bank, respectively for CEA-SMIA, C2EA, and CoE-EIE. | Within three (3) months following | * CEA-SMIA, C2EA, and CoE-EIE. |
|  | Extend CEA-SMIA’s audit committee arrangements to C2EA, and CoE-EIE. | Within three (3) months following effectiveness | * University of Abomey-Calavi |
|  | Deploy CEA-SMIA’s current accounting software SUCCESS with multi-projects, multi-sites, and multi-donor characteristics at C2EA, and CoE-EIE level. | Within three (3) months following effectiveness | * CEA-SMIA * C2EA * CoE-EIE. |
|  | Recruit an external auditor with ToRs acceptable to the World Bank | Within three (6) months following effectiveness | * CEA-SMIA * C2EA * CoE-EIE. |
| **Niger** | | | |
|  | Develop and adopt a revised Financial Management Manual to be used by CEA-CERPP and CEA-IEA-MS4SSA. | Requirement for first disbursement (part of DLR#1) | * UAM |
|  | Update the existing FM procedures Manual to be used by CE-Environnement minier. | Requirement for first disbursement (part of DLR#1) | * EMIG |
|  | Recruit two Senior Accountant with qualifications and experience satisfactory to the World Bank, each dedicated to support CEA-CERPP and CE-IEA-MS4SSA. | Within three (3) months following effectiveness | * UAM |
|  | Recruit a Senior Accountant with qualifications and experience satisfactory to the World Bank to strengthen the FM team to be dedicated to CE-Environnement minier. | Within three (3) months following effectiveness | * EMIG |
|  | Acquire a computerized accounting information system for the management of the proposed project, with specifications acceptable to the World Bank. | Within three (3) months following effectiveness | * UAM * EMIG |
|  | Recruit an internal auditor with qualifications and experience satisfactory to the World Bank to jointly support CEA/CERPP and CEA/IEA-MS4SSA. | Within three (3) months following effectiveness | * UAM |
|  | Recruit an external auditor with ToRs acceptable to the World Bank | Within six (6) months following effectiveness | * UAM * EMIG |
| **The Gambia** | | | |
|  | Recruit a Senior FMS | Within three (3) months following effectiveness | * PCU-Gambia |
|  | Customize the accounting software for the project’s bookkeeping | Within three (3) months following effectiveness | * PCU-Gambia |
|  | Recruit an internal audit consultant | Within three (3) months following effectiveness | * PCU-Gambia |
|  | Recruit an independent external auditor | Within three (6) months following effectiveness | * PCU-Gambia |

***Financial Management DLIs***

1. The DLRs below relate to Component 1 and Sub-component 2.1 and are incentives to strengthen FM. The DLRs are further elaborated in Section VI in the main text. They are:
   * **DLR#6.1** Timely fiduciary reporting including timely submissions of IFRs and of financial and procurement audit reports for the period for the center;
   * ***DLR#6.2***. Functioning internal audit unit and functioning audit committee (under the university’s council) that would support the center;
   * **DLR#6.3** Transparency of ACE expenses; and
   * **DLR#6.4**. Quality of Procurement planning. Share of the original approved procurement plan that was executed.

***Financial Covenants***

1. **For all participating countries and entities, financial covenants related to standard FM requirements is covered under Section 5.09 of the IDA General Conditions and specific FM aspects are included in the DFIL.** Further, additional covenants have been added to the FAs to reflect actions outlined in the FM action plan.

**Conclusion of the Assessment**

1. A description of the project’s FM arrangements as documented in the preceding paragraphs indicates that they satisfy the World Bank’s minimum requirements as per World Bank Policy. Overall the FM residual risk is assessed and rated as Substantial. The substantial risk rating is because of inherent risks associated with the design, including (i) the first project using the RBF for some of the implementing entities; (ii) the transfer of small grants to multiple beneficiaries; (iii) modalities for competitive grants; (iv)payments to training providers etc; and (v) possible challenges with multiple sector coordination of fiduciary matters.

***FM Implementation Support Plan***

1. **For all participating countries and entities, FM implementation support will be provided over the project’s lifetime.** The project will be supervised on a risk-based approach. Based on the outcome of the FM risk assessment, the following implementation support plan is proposed. The objective of the implementation support plan is to ensure the project maintains a satisfactory FM performance throughout its life.

**Table A2.4. *FM Implementation Support Plan***

| **FM Activity** | **Frequency** |
| --- | --- |
| **Desk reviews** | |
| Review of IFR | Quarterly for AAU, NUC and PCU-Gambia  Semiannually for all centers |
| Audit report review of the program | Annually |
| Review of other relevant information such as interim internal control systems reports | Continuous, as they become available |
| **On-site visits** | |
| Review of overall operation of the FM system (Implementation Support Mission) | Every six months for high/substantial risk  Annually for moderate/low risk |
| Monitoring of actions taken on issues highlighted in audit reports, auditors’ Management Letters, internal audits, and other reports | As needed |
| Transaction reviews | As needed |
| **Capacity-building support** | |
| FM training sessions | Before project effectiveness and during implementation as needed |

1. **Procurement**
2. **Procurement Assessments Summary: Overall, the procurement risk rating for the project is substantial.** At the regional level, AAU, in its role as the RFU will be responsible for procurement activities under Sub-component 3.1. NUC (Nigeria) and the PCU-Gambia will be responsible for the procurement activities under Sub-component 3. All procurement activities under Component 3 will follow World Bank procurement guidelines or/and regulation requiring that the procurement plans for such procurement activities be prepared, reviewed and cleared in STEP, as well as any prior review procurement. The Second ACE Impact centers will be responsible for the procurement activities under Component 1 and Sub-component 2.1. Under these sub-components, the World Bank funds will be disbursed against a set of DLIs to finance the non-procurable expenditures as defined under the EEPs. The non-EEPs, including procurement of goods and civil works under the project will be procured together with the institutions’ other operating requirements and needs, following the institutions’ own procurement procedures. These non-EEPs will be financed by the institutions’/governments’ own funds- and therefore, the procurement plans for those activities are not prepared in STEP and are not reviewed and cleared by the World Bank.
3. **NUC (Nigeria)**: The procurement assessment for NUC is completed. The procurement assessment indicates a risk rating of substantial. The NUC is a parastatal set up by the Federal Government of Nigeria, under the Federal Ministry of Education and funded by Federal Government. It has a Procurement unit headed by Director of Procurement, 12 qualified and Bureau of Public Procurement (BPP) certified procurement staff handling all procurement for NUC using BPP Public Procurement Act (PPA) of 2007 and standard documents based on approved procurement plans. Some of the officers were part of the ongoing ACE Project being financed by the World Bank. Contract management is handled by the user department with the inputs from the procurement officers. The main risk identified is the lack of experience in application of the new PR and STEP. To mitigate the risk, (i) the World Bank will offer training on PR and STEP for the procurement team after project effectiveness and hands-on support throughout the Project life, and (ii) recommend for the procurement head periodic World Bank procurement training in World Bank institutions in the sub-region.
4. **PCU-Gambia**: The procurement assessment for The Gambia is completed. The Gambia Public Procurement is characterized by many layers and key actors that involve the Presidency, the Cabinet, Ministry of Finance and Economic Affairs, The Gambia Public Procurement Authority (GPPA), the Complaints Review Board (CRB), the National Audit office (NAO) and the Procuring organizations (POs), and the private sector bidders. The legislative and regulatory framework provides for oversight functions to be carried out by GPPA, and the CRB. The GPPA, apart from its regulatory role, performs both the control and assurance function for all contracts; through ex-ante and post reviews of the procurement proceedings; including an adjudicatory role by virtue of its membership to the CRB.
5. The CRB as provided for in the Act is to promote and uphold fairness in the public procurement system through judicious and impartial adjudication of matters arising from disputed procurement proceedings. The CRB resolve disputes arising from bidders who claim to have suffered or risk suffering, loss or damage due to the breach of a duty imposed on a Procuring Organization by the Procurement Law. The CRB is already established as an autonomous body composed of seven members plus secretariat to provide administrative services.
6. Involvement of the GPPA in the World Bank’s funded projects: Most of the current implementing World Bank’s projects are not requesting approval from the GPPA while the 2014 Procurement Act state clearly that the GGPA shall apply a prior review control all procurement above the thresholds specified in the Regulations (GMD 1,000,000). The reasons given is the delay in the review of the procurement documents by the GPPA. The Gambia Local Fund (GLF) procurement policies promote competitive GLF procurement which is not in practice (as per last Public Investment Management Assessment (PIMA) review), however donor procurement rules are applied for donor-funded projects.
7. Implementation of the project ACE project: GTTI does not have procurement experience in implementing World Bank’s funded Project. The procurement activities for the project will be conducted using the existing institutional arrangements under the PCU for the implementation of the current Education Sector Support Projects (ESSP). The PCU-Gambia team is well versed in the IDA procedures, and has handled procurement under previous and on-going IDA programs as well as other donor operations where an executing agency is not in place. The PCU-Gambia has functioned satisfactorily over the life of the previous IDA/GPE-funded projects. Based on this experience, it is expected that the sum of expertise gained in the education sector projects will highly benefit the arrangements of the new project and help mitigate any procurement related risk. The EESP has a procurement manual which has been reviewed and cleared by the World Bank, however the procurement manual will be updated to take into consideration the specificity of the new project.
8. **Benin ACE Impact Centers**: The procurement assessment indicates a risk rating of Substantial. The two selected centers (Mathematical Sciences, Computer Science and Applications Institute (CEA-SMIA) and the Water and Sanitation (C2EA)) and the College of Engineering in Energy, Transport Infrastructures and Environment (CoE-EIE) in Benin reside in the public university of Abomey-Calavi. The public procurement system of the University of Abomey-Calavi is governed by the procurement Law No. 2017-04 of October 19, 2017 and the application decrees. The procurement institutional arrangements required by the national procurement code are formally established under the rector of the University of Abomey-Calavi with staff having relatively good procurement experience. The documents (Bidding Documents (BD), Request for Proposals (RfP), Bid Evaluation Report (BER) elaborated by each center will be submitted to the person in charge of procurement (Personne Responsable des Marchés Publics) to request the decision of the procurement control commission of the University of Abomey-Calavi or the National Procurement Control Directorate (*Direction Nationale de Controle des Marchés Publics*) under the MoF depending of the competency of the procurement control threshold. The person in charge of procurement (*Personne Responsible des Marchés Publics*) has been nominated in the University according to the procurement law. The procurement control commission with his chief has been established with five members.
9. The main risks identified for the University of Abomey-Calavi in Benin are: (i) no experience in applying PR), and STEP; and (ii) lack of staff that are solely dedicated to the center’s project procurement activities. To mitigate against these risks: (i) the university agreed to competitively hire one procurement specialist who will handle procurement activities for the 2 centers and the College of Engineering; (ii) the World Bank will offer training for all procurement entities at the university, including the person in charge of procurement, on PR and STEP after project effectiveness, where needed; and (iii) the centers and university of Abomey-Calavi will update their procurement manuals
10. **Togo ACE Impact Centers**: The procurement assessment indicates a risk rating of High. The centers in the current financing comprise one ACE I center CERSA and two New ACE centers (CERME and DOUNEDON). The selected centers in Togo reside in the public UL. The public procurement system of the UL is governed by Law No. 2009-013 of June 30, 2009, on public Procurement and Public Service Delegations and by Decree No. 2009-277 of November 11, 2009, containing the code of public contracts and delegations of public service. The UL has also established a Public Market Control Commission (*Commission de contrôle des marchés publics*, CCMP) and a Public Procurement Control Commission (*Commission de la passation des marchés publics*, CPMP), each consisting of five members. The CPMP is chaired by the chief public procurement officer (*Personne responsable des marchés publics,* PRMP). The procurement bidding documents have to be elaborated by each center of the project and will be submitted to the PRMP at the UL for the review of the CCMP, or for the decision of the National Procurement Control Directorate (*Direction Nationale de Contrôle des Marchés Publics*, DNCMP) under the MoF depending on the procurement control threshold described in the procurement code.
11. Among the three centers, only CERSA has an experience on the management of WBG projects through ACE I. However, CERSA will need to maintain a procurement specialist with acceptable qualifications as in the ACE I Project. It will also need to update its implementation manual to improve its contents on contract management, given long delays observed on major goods and works contracts during the implementation of ACE I. The mains risks identified for the two New centers are: (i) lack of experience in the management of WBG project; and (ii) lack of staff with an acceptable knowledge of procurement in regard to the center’s procurement-related activities including the elaboration of bidding documents. To mitigate against this risk, each of the two New centers must: (i) delegate or hire a dedicated procurement staff with an acceptable qualification to handle procurement activities, and (ii) elaborate an acceptable procurement manual or build on an updated manual of CERSA, including a section on contract management given that each New ACE center is planning to construct a building. At the beginning or during the lifetime of the proposed Second ACE Impact project, the two New centers could benefit from a hands-on support of CERSA.
12. **Nigeria New Second ACE Impact Centers**: The procurement assessment indicates a risk rating of Substantial. The selected centers are seventeen universities. The Second ACE Impact Project in Nigeria has a combination of the current ten ACEs and additional seven universities. The universities cut across Federal Universities, State universities and one privately own university. In line with the project preparation requirements, all the seven new universities were assessed, and only two were assessed in detailed. The universities follow the BPP procurement law of 2007 and all the standard bidding document issued by the bureau are being used by the institutions. Each of the universities has procurement unit which is headed by Directors of Procurement. The Directors have the required competences and experiences for the roles given by the university authority. The directors of procurement are supported by other staff from different professional backgrounds with relevant certifications from BPP. The staff of the procurement units were recruited by the university and not posted by the BPP. Some of the procurement officers have had opportunities of attending procurement courses outside Nigeria, and this has further enhanced their skills.
13. The universities have Procurement Planning committees and the committees are saddled with the responsibility of preparing the procurement plan annually. While the Tenders Board oversees all related activities on the evaluation of bids received by the institutions and recommendation of awards. The Tender’s Committee is headed by the Vice-Chancellors, while other members are the principal officers from the user departments, and procurement officer is the secretary. The procurement units are actively involved in all procurement management in the respective Centers. The Centers will prepare their procurement plans and submit to the World Bank through NUC for World Bank’s review and clearance. The Centers will implement their procurements through their respective University’s Procurement Department/Unit. The risks identified during the assessment of the newly added seven universities are: (i) lack of experience in PR, and STEP should in case the Center wants to execute World Bank Funded Procurement, and (ii) lack of experience of project management. In mitigating against these risks: (i) the World Bank will offer training for all the ACEs procurement staff, and the project implementation unit team on Procurement Regulation and STEP after project effectiveness; (ii) the NUC team would require World Bank’s procurement training to enable it offer hands-on support to the Centers throughout the Project life; and (iii) the annual procurement audit of the centers would be conducted on timely basis and reports will be shared with the respective Centers through NUC.
14. **Niger New and Emerging Centers**: The procurement assessment indicates a risk rating of Substantial. The Niger implementing agencies will use national procedures. Niger procurement texts are based on the WAEMU Community Directives. The public procurement system in Niger is governed by the Law No. 201-37 of October 28, 2011 related to Core Principles, Control and Regulation, the Decree No. 2016-641/PRN/PM of December 1st, 2016 and their related application orders. While the texts are good overall, their practice shows a lot of shortcomings in terms of organization, quality and number of qualified staffing. World Bank procurement experience in Niger has shown that there are: (a) significant delays are experienced in procurement processing due to poorly prepared procurement documentation; and (b) low capacity in the use of World Bank’s standard procurement documents.
15. Niger has three centers that will participate in this project. Two of the centers are in the UAM and they are: The Center for Pastoral Productions: Meat, Milk, Leather and Skins (CEA-CERPP) within the Faculty of Agronomy and the Center for the Innovative Teaching/Learning of Mathematics and the Sciences for SSA (CEA-IEA-MS4SSA – an Emerging center) within the *Ecole Normale Supérieure-ENS*. The third center is the Emerging Center in Mining Environment (CE-Environnement Minier) within the *EMIG*. EMIG is under the supervision of the Ministry of Mines.
16. UAM has a central unit dedicated to procurement activities for all of its dependencies (faculties, research institutes and high school). The procurement Unit (*Services des Marchés Publics*) is housed within the “*Division Finances et Marchés Publics*”, which is in charge of the preparation of UAM’s budget, the budget execution and the entrustment of the receivables. This is a departure from the principle of good governance which must result in the fact that the party making the payments is not also in charge of the procurement. There is no procurement manual. The Procurement Unit uses the existing regulatory texts which are numerous to conduct its procurement activities. Currently, the unit is staffed with only one key staff with procurement experience and has undergone procurement training on national procedures. This staff is supported by only one trainee staff and there is a need to have additional procurement staff recruited for the unit. The risks identified during the assessment of the UAM Procurement Unit are: (i) the lack of a procurement manual; (ii) too many procurement activities for the procurement specialist of UAM, which may affect the quality of documentation and project performance; (iii) delays in evaluation by the evaluation committee and awarding of contracts; and (iv) the lack of a dedicated archiving room with a trained staff member for its management.
17. In the case of EMIG, the existing manual for administrative and accounting procedures was adopted on March 27, 2009 and is outdated. There is an accounting and financial department but there is no procurement unit. When required, the General Director sets up a procurement committee in accordance with the national regulatory texts. The risks identified during the assessment of EMIG are the following: (i) the organization chart adopted on April 20, 2018, does not include a procurement service unit; (ii) the administrative and accounting manual of procedures is outdated; (iii) lack of a Procurement Specialist who is proficient in national procurement procedures; (iv) delays in activities which are linked to evaluation committee management and awarding of contracts; and (v) lack of a dedicated archiving room with a trained staff for its management.
18. An action plan to mitigate the risks identified in the procurement assessment has been prepared, in consultation with the Recipients. With the implementation of the proposed measures of the action plan and the support of the World Bank team, the overall procurement risk will be rated Substantial.

***Table A2.5: Action Plan for Strengthening Procurement Capacity in Niger (for UAM and EMIG***

| **No.** | **Key risks** | **Mitigation Actions** | **By Whom** | **By When** |
| --- | --- | --- | --- | --- |
|  | | | | |
| 1 | Lack of procurement manuals | Preparation of project implementation manual, which will include procurement manual. This will be reviewed and agreed by World Bank.  Organize a workshop to UAM staff involved in the project. | UAM/EMIG | Preferably three months after project effectiveness (requirement for DLI#1, prerequisite for initial disbursement) |
| 2 | Too many procurement activities for the procurement specialist of UAM that may affect the project performance | Appointment of one qualified procurement specialist through a competitive process | UAM | Not later than three (3) months within project effectiveness. |
| 3 | Delays in evaluation activities linked to evaluation committee with management of award of contracts | Regular monitoring of procurement plans implementation to ensure quality of the procurement process.  The critical approval times will be reflected in the timelines of the procurement plan. | UAM | Throughout project life |
| 4 | Lack of a dedicated archiving room with a trained staff for its management | Provide adequate space and equipment for the procurement archive and adequate filing system | UAM | No later than six (6) months after the project’s effective. |
| Designate the procurement assistant to be responsible for data management |

1. Overall the procurement risk rating for the Implementing Agencies (centers, AAU, NUC and the PCU-Gambia) across the project is Substantial.
2. The applicable thresholds for AAU (based on Ghana’s thresholds are shown below in Tables A2.6a.

**Table A2.6a. *Applicable Procurement Thresholds for Ghana (to be used by AAU)***

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Prior Review Threshold in (US$’000)** | | | | | **Procurement Methods Thresholds in (US$’000)** | | | | | | | |
| **RISK RATING** |  | | **Consultants** | | **Single Source & Direct Contract** | **Works** | | | **Goods, IT and non-consulting services** | | | **Shortlist of National Consultants** | |
| **Works** | **Goods, IT Systems+ Non Con. Serv** | **Firms** | **Individuals** | **Open International or ICB** | **Open National or NCB** | **Request for Quotation/ National Shopping** | **Open International or ICB** | **Open National or NCB** | **Request for Quotation/ National Shopping** | **Consulting services** | **Engineering & construction supervision** |
| **HIGH** | ≥$5,000 | ≥$1,500 | ≥$500 | ≥$200 | ≥$50 | ≥15000 | ≥15000 | ≥200 | ≥3000 | ≥3000 | ≥100 | ≥300 | ≥500 |

1. The applicable thresholds for Nigeria are shown below in Tables A2.6b.

**Table A2.6b. *Applicable Procurement Thresholds for Nigeria (to be used by the NUC)***

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Procurement Type | Substantial Risk ($'000) | Works | | | Goods, IT & Non-Consulting Services | | | Shortlist of National Consultants | |
| Works | 10,000 | Open International or ICB  ($'000) | Open National or NCB ($'000) | Request for Quotation or National Shopping ($'000) | Open international or ICB ($'000) | Open National or NCB ($'000) | Request for Quotation or National Shopping ($'000) | Consulting Services ($'000) | Engineering & Construction Supervision ($'000) |
| Goods, IT & Non-Consulting Services | 2,000 | ≧ | < | ≦ | ≧ | < | ≦ | < | ≦ |
| Consultants (Firms) | 1,000 | 20,000 | 20,000 | 200 | 5,000 | 5,000 | 100 | 300 | 500 |
| Individual Consultants | 300 |

1. **Frequency of Procurement Supervision**: In addition to the prior review supervision which will be carried out by the World Bank per each country’s World Bank Procurement Specialist, semi-annual supervision missions are recommended. Annual World Bank Procurement Post Review will be conducted in the respective countries by the World Bank’s Procurement Specialists. The sample size will be based on the procurement risk rating for the Implementing agencies in each country. The prior review procurements will be reviewed and cleared in STEP by the respective World Bank Procurement Specialists for the Implementing Agencies residing in the respect countries. The AAU Procurement Consultant will support, advise and supervise the ACE Centers.
2. **Summary of the regional Project Procurement Strategy for Development (PPSD) covers the activities under Component 3 of both the First and Second ACE Impact projects.** The countries’ context in terms of bureaucracy, economic condition, currency stability, financial constraints, technology, and inadequate national market for high value and complex procurements, identified minor safeguards issues, coupled with the countries’ economic, procurement, and safeguards policies will impact the approach and response to the market and the execution of contracts. The capacities of the AAU, NUC, and the PCU-Gambia and identified procurement risks will impact the procurement implementation. Thus, timely and adequate execution of the mitigation measures will help improve procurement implementation under the project. The studies and analysis show that there are opportunities for both national and international firms under the project in each of the countries.
3. **Procurement will be carried out in accordance with: (i) the World Bank PR for IPF Recipients Procurement dated July 2016, revised in November 2017 and August 2018; (ii) the ‘Guidelines on Preventing and Combating Fraud and Corruption in Projects financed by IBRD Loans and IDA Credits and Grants’, dated October 15, 2006, revised in January 2011 and July 2016; and (iii) the provisions stipulated in the financing agreements.** Any works bidding documents will be based on the Standard Procurement Document, recently enhanced to reflect positions on the Environment, Social Health and Safety. The STEP will be the platform for preparing, submitting, reviewing and clearing procurement plans and prior review procurement activities. The POM will elaborate on the procurement procedures, Standard Procurement Documents (SPDs) and model contracts associated with the market approaches and selection methods, for various procurement categories. The summary of procurement activities under Component 3 are as shown below in Table A2.7. The details of the procurement plans are in STEP.

**Table A2.7. *Summary of Procurement Activities under Component 3***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Contract Title, Description and Category** | **Estimated amount (US$)** | **World Bank oversight** | **Procurement Approach / Competition** | **Selection** | **Evaluation** |
| Recruitment of Project Implementation unit staff, Individual long-term consultants/staff for fiduciary and safeguard oversight and support. (Project Coordinator, Communication Officer, M&E Specialist, Procurement Officer, Accountant, Internal Auditor, Administrative Assistants) | 3,000,000 | Post/Prior Review | Open/Limited & National/ International | CQS/ QCBS  RfP | Most Advantageous Proposal (MAP) –rated criteria |
| Procurement of consultants (Procurement Auditor, External Auditor, Agriculture related expert, Health-related Expert, STEM related expert, M&E Digital Platform, Graduate Tracer Studies etc) | 2,500,000 | Prior Review | Open International | QCBS - RfP | MAP –rated criteria |
| Goods – mostly office equipment, office consumables, furniture, fuelling etc. | 650,000 | Post | National | RfQ | Most Advantageous Bids (MAB) |
| Accounting Software and relevant IT Software relevant for the project. | 50,000 | Post | National | RfQ | MAB |
| Note: QCBS-RfP: Quality Cost Based Selection with Request for Proposals; ICS: Individual Consultants Selection; RfQ: Request for Quotation; MAB: Most Advantageous Bid; MAP: Most Advantageous Proposal | | | | | |

|  |
| --- |
| **ANNEX 3: Disbursement-Linked Indicators** |

1. **Matrix Comparing DLIs for ACE I, ACE II and First/Second ACE Impact**

|  |  |  |  |
| --- | --- | --- | --- |
| **DLIs** | **ACE I** | **ACE II** | **First & Second ACE Impact** |
| 1. **Institutional readiness results** | * + Completion of effectiveness condition in each legal agreement   + PSC members endorse resolution for regional specialization | * + Completion of effectiveness condition in each legal agreement   + Development of implementation plan | **Basic readiness**:   * The FA is effective. * The RFU has approved of the ACE Impact Center’s Project Implementation Plan and the Procurement and Financial Management Manuals. * Official designation of the core team members (ACE Impact Center leader, Deputy ACE Impact Center leader, FM responsible, procurement responsible, M&E responsible and sectoral liaison). * The ACE Impact Center has designated a non-staff student representative to the RFU.   **Full readiness**:   * Project Management certification for at least one leading team member. * Functional center website; Student handbook on the website with policies for sexual harassment and scholarships. * SAB constituted and its endorsement of the Project Implementation Plan. |
| 1. **Development Impact of ACE Center** | NA | NA | * + Independent, external evaluation of the development impact of the ACE Impact Center. |
| 1. **Quantity of students with focus on gender and regionalization** | * + Number of PhD, master’s and short-term students enrolled | * + Number of PhD, master’s and short-term students enrolled | * + Number of new PhD, master’s and short-term students enrolled.   + Number of new undergraduate students enrolled (particularly for the Emerging centers and colleges of engineering). |
| 1. **Quality of Education and research through international accreditation, research publications and improved teaching and research infrastructure** | * + Accreditation (international, regional, national) of education programs; gap assessment, self-evaluation   + ACE related research publications in internationally recognized peer reviewed journals   + Meeting milestones for civil works and major equipment purchase | * + Accreditation (international, regional, national) of education programs; self-evaluation   + ACE related research publications in internationally recognized peer reviewed journals | * + Accreditation (international, regional, national) of education programs; gap assessment, self-evaluation.   + ACE relevant research publications in internationally recognized peer reviewed journals.   + Completion of milestones for improved learning and research infrastructure specified in the approved Project Implementation Plan of each ACE Impact Center. |
| 1. **Relevance of Education and Research through externally generated revenue, internships, and entrepreneurship** | * + Externally generated revenue   + Number of outreach periods, at least 1-month (internships) for faculty, master’s and PhD students | * + Externally generated revenue   + Number of faculty and PhD exchanges for at least 2 weeks to other institutions or host faculty and PhD students from other institutions   + Number of partnerships for collaboration in applied research and training | * + Externally generated revenue.   + Number of students and faculty with at least 1-month period internships in relevant industry/ institutions.   + Meeting the milestone for developing entrepreneurship, innovation, start-up companies, and commercialization support programs. |
| 1. **Timeliness and quality of fiduciary management** | * + Timely withdrawal application for the period   + Functioning audit committee   + Functioning internal audit unit   + Web Transparency on FM   + Timely procurement audit   + Timely and satisfactory procurement progress | * + Timely withdrawal application for the period   + Functioning audit committee   + Functioning internal audit unit   + Web Transparency on FM   + Timely procurement audit   + Timely and satisfactory procurement progress | * + Timely fiduciary reporting.   + Functional institutional oversight of fiduciary management. Functioning internal audit unit and functioning audit committee (under the university’s council).   + Transparency of ACE expenses, notably the approved budget, annual work plan, IFRs with an annex on detailed expenditures, project financial and procurement audit reports are visibly accessible on the ACE Impact Center’s websites.   + Quality of Procurement planning. Share of the originally approved procurement plan that was executed. |
| 1. **Institutional Impact** (to be accomplished by ACE host institution) | NA | * + Benchmarking initiative participation | * + University- wide regional strategy.   + Open, merit-based competitive selection of the head of the university and/or the department heads related to the ACE.   + Institution wide international accreditation, gap assessments and self-evaluations.   + PASET Regional Benchmarking participation.   + Meeting milestones for promoting institutional impact   + Enhanced participation in the NREN. |

|  |
| --- |
| **ANNEX 4: Strategy and Approach for Implementation Support** |

* + 1. **Implementation Support Plan**

1. **The strategy for implementation support has been developed based on the nature of the project and its risk profile.** The strategy aims to make implementation support to the client flexible and efficient. It focuses mainly on implementation of the risk mitigation measures. The World Bank’s approach to implementation support strongly emphasizes open and regular communication with all actors directly involved in the project (such as the selected centers, the NSC, the PSC, RFU and co-funders), constant information exchange, and adequate flexibility to accommodate the specificities of each of the participating countries. During project preparation, the team aimed to develop communication channels, informal links, and to build trust with all stakeholders.
2. The strategy is based on several mechanisms that will enable enhanced implementation support to the governments and timely and effective monitoring. Implementation support will comprise: joint review missions; regular technical meetings and field visits by the World Bank between the formal joint review missions; and internal audit and FM reporting.
3. **Weekly collaboration with the AAU team** to strengthen common project implementation support and supervision tools, notably support and generic templates that the universities can use for implementation, monitoring and oversight. This will always be undertaken in collaboration with the centers and PSC involvement in important matters. This will in particular support development of ToRs, template/methods for implementation support, include ToRs and coordination with partners for capacity building, and supervision tools, including third-party monitoring for the verification of DLIs, institutional audit committee, procurement reports, etc.
4. **Joint Review Missions** where all main stakeholders, including all First and Second ACE Impact centers and PSC members meet to review and discuss progress, based on M&E reports, AAU aggregated reports, and other supervision material. This is a key opportunity for peer learning and comparison of progress and identification of common challenges. This is expected to take place twice a year. These missions will include visit to selected centers.
5. **AAU reporting and capacity building**. Reporting on the centers based on the PFAs; and internal audit, FM and safeguards reports.
6. **Use of external academic and business advisors and evaluators**. To the extent possible and funds permitting, the AAU and the World Bank will seek to work with international partners as has been the case in ACE I.
7. **Country and center specific interventions by the team, most often by the country-office based World Bank staff.** This will be necessary when requests from the RFU are not met, procedures in the project-level operational are not followed, or to facilitate important coordination between partners. This could be the case for addressing fiduciary issues, for example. Such country interventions will be coordinated with the governmental agency responsible for the project or with the NSC.
8. **An MTR for the proposed project is scheduled for June 2021.** The objective of the MTR will be to review the progress of the project implementation and results. The MTR will also undertake a comprehensive review of the DLI framework for all the centers and adjust the DLIs and implementation arrangements for the project, if needed.
   * 1. **Detailed Lessons from the ACE I Project on Implementation Support**
9. **The ACE I Project is the first regional RBF project and the first World Bank-funded project utilizing RBF for universities**. Despite the steep learning curve, ACE I is currently one of the top disbursing projects of the regional integration portfolio, with a 86 percent disbursement rate (as of September 2019) and in four years has delivered key results (see Box 1-in main text- on ACE I Project achievements). A key factor of this success has been the effective technical and operational implementation support provided by the governments, RFU (AAU) and the well-structured World Bank regional and country teams. The current ACE I Project implementation arrangements can be scaled up to continue the effective implementation support and supervision currently in place for the ACE I centers.
10. **Key elements of the ACE I Project implementation working arrangements include the following:**
11. **Once selected, each ACE I center was responsible for implementation of its own proposal.** The regional competitive approach allowed for committed and dynamic teams to be selected which generated interest on the part of universities to successfully deliver their proposals. Project implementation has shown that in instances where implementation challenges were encountered, the common denominators across the centers were weak governance and project management arrangements. Thus, a key part of good implementation is ensuring the right teams are selected and supported.
12. **The AAU through an RFU grant has provided extensive technical and****implementation support**. This support has led to problem solving for the centers. The AAU has established a technical implementation support and supervision structure that paired each center with at least two academic and technical leaders in their field of specialization. These academic and scientific supervisors provide:

* in-depth technical review on overall center management to ensure the centers are moving in the right direction;
* guidance and linkages to relevant industry and sector partners;
* guidance on international accreditation agencies and possible fund-raising opportunities; and
* up-front identification of project management and governance challenges at the centers.

1. **Peer-learning and regional implementation support**. Since 2014, the ACE I Project has convened two large regional peer-learning and implementation support workshops in which all the 22 ACE I center teams, including the center leader, deputy center leader as well as FM, procurement and M&E officers participate. These regional workshops fulfill two main functions:

* *Project operations learning by the ACE I centers*. The regional workshops provide an important and much-needed platform for operational clarifications and improvements to project operations. This includes the DLI verification, fiduciary, safeguards compliance and disbursement processes, where the ACEs are provided guidance and an opportunity to provide feedback. Obtaining feedback from the centers on verified results prior to disbursement has been important in building trust in and strengthening of the verification process.
* *Peer-learning for the ACE I centers*. The regional workshops have also provided opportunities to share best practices on key objectives of the project, including: attracting regional students, meeting international accreditation standards, generating external revenue, sustainability, and university-industry partnerships. In 2017, a joint regional meeting between ACE I and ACE II centers was held in Ghana.

1. **Strong national implementation support leads to accelerated implementation by the ACE centers**. The role of the national steering committee has been fundamental in addressing governance and project management challenges at the ACE centers. In situations where governments have been responsive, for instance in Nigeria, there has been a positive turnaround in performance on the part of some centers and the proactive reallocation of funds towards ensuring the achievement of project objectives.
2. **Good implementation of the RBF model.** Despite initial delays, the AAU through dedicated support from the World Bank team has been effective in delivering timely verification of ACE I Project DLIs. In particular, the timely sharing of results and consistent calibration and improvements to DLI definitions has been a key factor in the successful implementation of the RBF model.
3. **Regular surveys of the performance of ACE I Project stakeholders, including the governments, the centers, AAU and the World Bank**. Two annual performance surveys are administered by the AAU to obtain feedback on implementation support provided to the project to inform further improvements. A student survey is also administered annually to ACE I students to obtain feedback on each ACE I center’s performance in relation to its student body.

|  |
| --- |
| **ANNEX 5: Implementation Support Plan and Resource Requirements** |

1. **Technical Inputs**
2. The World Bank will provide strong implementation support to the centers, the RFU and the relevant national facilitation agencies regarding technical, fiduciary, social, environmental and safeguards issues. Formal implementation support and field visits will be carried out as required.
3. **Fiduciary requirements and inputs.** The World Bank’s FM and procurement specialists will provide training before project effectiveness, and during project implementation. The training will allow teams from the ACE centers and the RFU to build capacity in matters of FM and procurement, particularly as it relates to World Bank procedures. As part of the project implementation support plan, supervision of FM arrangements will be carried out, and support provided on a timely basis as per project needs. Procurement implementation support will be provided on a timely basis as required by the participating institutions and entities.
4. **Safeguards.** The World Bank’s social safeguards specialist will ensure that training is provided to relevant counterpart staff and undertake field visits as required. On the environmental side, support will focus on ensuring the project’s compliance with the ESIAs and/or ESMPs developed as applicable to the centers, with respect to activities to be executed under Component 1 and Sub-component 2.1, ensuring that they comply with the World Bank’s safeguards policy on Environmental Assessment (OP/BP 4.01).
5. **Country Relations**. The TTLs will coordinate with the Country Co-TTLs, GP focal points, the World Bank fiduciary and safeguards team at large and the RFU to ensure project implementation is carried out in accordance with the World Bank’s requirements as specified in the legal agreements. Moreover, the TTLs and the Country Co-TTLs will meet with the governments, the NSC and senior staff of selected centers on a regular basis to keep them informed of the project’s progress and issues that require resolution at their level. Constant channels for information exchange will be maintained with all major actors, taking advantage of the trust and communication capacity built during the project preparation phase.
6. **Monitoring and Evaluation**
7. Systematic, continuous tracking of performance by collecting and analyzing data on agreed measures and indicators will be supported in order to: (i) measure progress towards the achievement of the PDO; and (ii) ensure project activities are implemented as planned and using the appropriate procedures. Importantly, disbursement to the centers will be linked to the achievement of DLRs. The RFU will oversee the overall M&E of the project, as well as ensure that a robust M&E database system is institutionalized, and that all data are publicly available online. M&E will be carried out at both the center and regional levels of the project implementation. Each center will undertake M&E functions through its own existing administrative arrangements, in collaboration with the relevant Ministries of Finance and Education. The proposed Second ACE Impact Project will support strengthening of M&E capacity at both the center and RFU levels through TA.
8. The M&E framework will be continuously strengthened through the integration of timely performance data, allowing for the identification of strengths and weaknesses useful for decision-making. Implementation of the ACE I and II projects demonstrate that the RBF model and its related verification processes are often difficult for centers to understand leading to poor data quality and delays in implementation. ACE Impact centers will, therefore, be incentivized through the first DLI to hire an M&E officer to enable full participation in the capacity-building workshops that will be organized immediately following project approval. The verification process utilizes multiple verification agencies and experts and requires a constant feedback loop from the centers. The capacity of the administrative staff and the M&E officers at the RFU will be further enhanced for efficient management of multiple contracts and processes and timely responses to M&E related requests from the centers.
9. The project will build capacity in the RFU to: (i) prioritize the importance of the quality of data submitted by the centers as it is integral to the verification; (ii) regularly communicate with the centers the process for verification early on in the implementation process, with clear expectations for each DLR’s timeline; (iii) undertake regular communication and coordination with verifiers with regard to the student verification process; and (iv) communicate early the processes for the verification of civil works and large equipment purchases.
10. The main focus of implementation support is summarized below.

**Table A5.1. *Focus of Implementation Support***

|  |  |  |  |
| --- | --- | --- | --- |
| **Time** | **Focus** | **Resource Estimate (Staff Weeks- SWs)** | **Partner**  **Role** |
| First  twelve months | Technical Review/Support | TTLs 12 SWs  Country Co-TTLs: 5 SWs  M&E Specialist 2 SWs | NA |
| FM training and supervision | FM specialist 8 SWs |
| Environment and Social monitoring &  Reporting | Environment Specialist 4 SWs  Social Development Specialist 4 SWs |
| Higher Education Topics and Gender | Higher Education/Gender Specialist 2 SWs |
| Institutional arrangement and project supervision coordination and Team Leadership | TTLs 15 SWs |
| 12-48  months | Technical Review/Support | TTLs 4 SWs Country Co-TTLs 3 SWs  M&E Specialist 3 SWs |  |
| Environment and Social monitoring &  Reporting | Environment Specialist 3 SWs  Social Development Specialist 3 SWs |
| FM disbursement and reporting | FMS 4 SWs |
| Procurement management | Procurement Specialist 2 SWs |
| Institutional arrangement and project supervision coordination and Team Leadership | TTLs 12 SWs |

\* SW – staff week

**Table A5.2: *The Annual Staff Sill Mix Required***

|  |  |  |  |
| --- | --- | --- | --- |
| **Skills Needed** | **Number of Staff Weeks (SWs)** | **Number of Trips** | **Comments** |
| Operations | 8 SWs annually | Fields trips as required. | Headquarters and Country office based |
| Higher Education | 8 SWs annually | Two | Externally based |
| M&E | 4 SW annually | Fields trips as required. | Country office based |
| Procurement | 3 SWs annually | Fields trips as required. | Country office based |
| Social Safeguards | 3 SWs annually | Fields trips as required. | Country office based |
| Environment | 3 SW annually | Fields trips as required. | Country office based |
| Infrastructure | 2 SW annually | Field trips as required | Headquarters/Regionally based |
| FM | 6 SWs annually | Fields trips as required. | Country office based |
| Task Team Leaders | 15 SWs first year, then 12 SWs annually in the following years | Field trips as required | Headquarters Based |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ANNEX 6: Thematic Areas for First and Second ACE Impact Projects** | | | | | |
| Project | STEM | Agriculture | Health | Environment  (part of STEM) | Applied Social Sciences/Education | |
| First and Second ACE Impact  (\*including AFD funded centers in Côte d’Ivoire) | ACE : Mathematical Sciences, Computer Science and Applications | \*ACE: Climate Change, Biodiversity and Sustainable Agriculture | ACE: Cell Biology of Infectious and Non-Communicable Diseases | ACE: Regional Water and Environmental Sanitation | \*ACE: Statistics and Quantitative Economics | |
| \*ACE: Mines and Mining Environment | ACE : Dryland Agriculture | ACE: Genomics of Infectious Diseases | ACE: Innovation and Transformations in STEM Education | ACE: Innovation and Transformations in STEM Education | |
| ACE: ICT-Driven Knowledge Park | ACE: Food Technology and Research | ACE: Neglected Tropical Diseases and Forensic Biotechnology | ACE: Training and Research in Water Science and Technology, Energy and the Environment in West and Central Africa | ACE: Sustainable Cities in Africa | |
| ACE : Oilfield Chemicals Research | ACE : Poultry Sciences | ACE: Reproductive Health Innovation | Emerging Center: Innovative Teaching/Learning of Mathematics and the Sciences for SSA | |
| ACE: Mathematics, Computer Science and ICT | ACE: Pastoral Productions: Meat, Milk, Leather and Skins | ACE: Maternal and Infant Health | ACE : Water and Sanitation |  | |
| ACE : Regional Transport Research | ACE: Agriculture for Food and Nutrition Security | ACE: Training, Research and Expertise in Drug Sciences |
| ACE: Water, Irrigation and Sustainable Agriculture | ACE : Crop Improvement | ACE: Bio-technological Innovation for the Elimination of Vector- Borne Diseases | \*ACE: Valorization of Waste Products with High Value Added |  | |
| ACE : Technology Enhanced Learning |  |  |
| ACE: Applied Informatics and Communication |  | ACE: Genetic Medicine | ACE: Energy and Environmental Sustainability |  | |
| ACE: New Pedagogy in Engineering Education |  | ACE: Prevention and Control of Communicable Diseases |
| ACE: Sustainable Power and Energy Development |  | ACE: Public Health and Toxicological Research | ACE : Coastal Resilience |  | |
| ACE: Future Energies and Electrochemical Systems |  | ACE: Population Health and Policy |
| ACE : Control of Electricity |  | ACE: Mycotoxin and Food Safety | ACE : Environment and Health |  | |
| Emerging Center: Logistics and Transport | ACE: Drug Research, Herbal Medicine Development and Regulatory Science |
| Emerging Center: Mines and Societies |  |  |  |  | |
| Emerging Center : Mining Environment |
| Emerging Center: Science, Technology and Engineering for Entrepreneurship |
|  | | | | | | |
| ACE I | CEA-SMIA : Center d’Excellence Africain en Sciences Mathématiques, Informatique et Applications | WACCI-ACE: African Center of Excellence for Training Plant Breeders, Seed Scientists and  Technologists | WACCBIP: West African Center for Cell Biology of Infectious Pathogens | CEA-2iE : Center d’Excellence pour la formation et la recherche en Sciences et Technologies de l’Eau, l’Energie et l’Environnement |  | |
| CETIC : Center d'Excellence Africain en Technologies de l'Information et de la Communication | CEADESE: Center of Excellence in Agricultural Development and Sustainable Environment | ACEGID: African Center of Excellence for Genomics of Infectious Diseases | (CEA-CCBAD) : Center d'Excellence Africain sur le Changement Climatique, la Biodiversité et l'Agriculture  Durable |  | |
| CEA MEM : Center d'Excellence Africain Mines et Environnement Minier | CDA: Center for Dryland Agriculture | ACEPRD: African Center of Excellence in Phytomedicine R&D | RWESCK: Regional Water and Environmental Sanitation Center Kumasi |  | |
| ENSEA : Ecole Nationale Supérieure De Statistique Et D'économie Appliquée | CEFTER: Center for Food Technology and Research | CERHI: Center of Excellence in Reproductive Health Innovation |  |  | |
| CEFOR: Center of Excellence in Oil Fields Chemical Research | CERSA : Center d'Excellence Régional sur les Sciences Aviaires | ACENTDFB: African Center of Excellence for Neglected Tropical Diseases and  Forensic Biotechnology |  |  | |
| OAK-Park: OAU ICT –Driven Knowledge Park |  | CEA-SAMEF : Center d'Excellence Africain pour la Santé de la Mère et de l'Enfant |  |  | |
| PAMI: Pan African Materials Institute |  |  |  |  | |
| MITIC: |  |  |  |  | |
|  |  |  |  |  |  | |
| ACE II | ACEIOT: African Center of Excellence in Internet of Things | ACALISE: African Center of Excellence in Agroecology and Livelihood Systems | ACEEZD: African Center of Excellence for Emerging and Zoonotic Diseases | ACE-ESD: Africa Center of Excellence in Energy for Sustainable Development |  | |
| The Copperbelt Africa Center of Excellence in Sustainable Mining | CLIMATE SABC: Africa Center of Excellence for Climate Smart Agriculture and Biodiversity Conservation | ACEPHEM: Africa Center of Excellence in Public Health and Herbal Medicine | WISE-FUTURES: Water Infrastructure and Sustainable Energy Futures |  | |
| MAPRONANO: Africa Center of Excellence in Materials Product Development and Nanotechnology | INSEFOODS: The Africa Center of Excellence in Sustainable Use of Insects as Food and Feeds | CDT-Africa: Center for Innovative Drug Development and Therapeutic Trials for Africa | ACEWM: African Center of Excellence for Water Management |  | |
| PTRE: Africa Center of Excellence in Phytochemicals, Textile and Renewable Energy | RAT-TECH: Africa Center of Excellence for Innovative Rodent Pest Management and Biosensor Technology Development | SACIDS: Southern African Center for Infectious Disease Surveillance |  |  | |
| ACEITLMS: African Center of Excellence for Innovative Teaching and Learning Mathematics and Science | MARCCI: Makerere University Regional Center for Crop Improvement | PHARMBIOTRAC: Africa Center of Excellence for Pharm-Biotechnology and Traditional Medicine Center |  |  | |
| ACE-DS: African Center of Excellence in Data Science | AquaFish: Africa Center of Excellence in Aquaculture and Fisheries Science |  |  |  | |
| ARERI: African Railway Education and Research Institute | CREATES: Africa Center of Excellence for Research, Evidence Agricultural Advancement, Teaching Excellence and Sustainability |  |  |  | |
| CS-OGET: Center for Studies in Oil and Gas Engineering and Technology | CESAAM: Africa Center of Excellence in Sustainable and Agribusiness Management |  |  |  | |

|  |
| --- |
| **ANNEX 7: Economic and Financial Analysis** |

1. **The economic and financial analysis provides the rationale for investing in higher education in SSA countries and estimates the economic IRRs for education.** This section includes the following segments: (i) an analysis of the education sector and key issues in the higher education sector, and the identification of linkages between educational outcomes and the labor market; (ii) an overview of the project development impact in terms of expected benefits and costs; and (iii) a cost-benefit analysis of the proposed project, including a financial and fiscal sustainability analysis.

***Return to Education in SSA***

1. **Higher education yields significant benefits for African youth and society as a whole, including: better employment opportunities and job prospects, improved quality of life, and greater economic growth.** The contribution of higher education to economic growth is reported to occur via interacting functions including: (i) knowledge production; (ii) knowledge diffusion; and (iii) knowledge transmission. These different functions have a number of goals, to: (i) promote income growth; (ii) promote the creation of new technologies; (iii) to inform leaders; (iv) expand the range of choices; and (v) provide increasingly relevant skills. Studies show that:[[19]](#footnote-20)

* A one percent increase in the stock of higher education (the number of people having completed higher education) leads to a 0.35 percent increase in industrial production, and that a one percent increase in the number of engineering or natural sciences graduates leads to a 0.15 percent increase in agricultural production.
* A one-year increase in average higher education levels would raise annual GDP growth in Africa by 0.39 percentage points, and eventually yield up to a 12 percent increase in GDP.

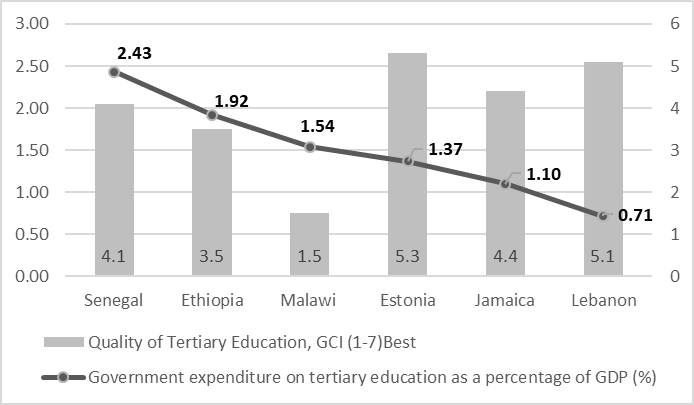
**Table A7.1. *Enrollment Rates in Higher Education Across the World Regions (2006, 2016)***

|  |  |  |
| --- | --- | --- |
| **Region** | **2006** | **2016** |
| **Europe and North America** | 69.4 | 75.4 |
| **Central and Eastern Europe** | 61.1 | 77.7 |
| **Latin America and the Caribbean** | 33.1 | 48.4 |
| **Western Asia and Northern Africa** | 25.9 | 42.6 |
| **East Asia and the Pacific** | 23.9 | 43.9 |
| **Arab States** | 22.7 | 32.0 |
| **South and West Asia** | 11.1 | 25.0 |
| **SSA** | **6.0** | **8.5** |

*Source: UNESCO UIS, http://stats.uis.unesco.org retrieved on March 4, 2018.*

1. **At 8.5 percent in 2016, enrollment rates in higher education in Africa are the lowest across the world’s regions (see Table A7.1).** While African countries have been successful in increasing access and enrollment to primary education in recent years, much more is needed to improve enrollment rates at higher levels of education. Despite all of the efforts to increase access to higher education, enrollment rates in SSA countries did not experience significant growth within the last decade. Enrollment rates in higher education in the region increased by 2.5 percent between 2006 to 2016, while enrollment rates in other regions such as South and West Asia more than doubled (from 11 percent in 2006 to 25 percent in 2016).
2. **SSA countries are investing in higher education, but without achieving sufficient returns.** Despite significant investments in higher education, the quality of the education delivered in SSA countries tends to be lower than countries in other regions. Figure A7.1, for instance, shows that countries such as Ethiopia, Malawi and Senegal where government expenditure on tertiary education as a percentage of GDP ranges between 1.5 to 2.4 percent, have scores between 1.5 and 4 for the aspect “quality of tertiary education” of the Global Competitiveness Index[[20]](#footnote-21); while other countries like Jamaica, Lebanon and Estonia have scores higher than 4.4 with lower investment ranging between 0.7 to 1.4 percent. All of the countries in SSA face resource constraints making it difficult to afford the interventions needed to develop a strong higher education system to compete internationally. Consequently, regional specialization within higher education with a focus on specific regional skills shortages will support growth and competitiveness in SSA. Coordinated regional investments, with country specific specialization, allow the region to develop a broad-based S&T ecosystem covering critical areas where S&T capacity is needed, even in a context of limited faculty and resources. A well-networked and integrated S&T ecosystem can develop advantages associated with economies of scale, with declining unit costs for graduates and knowledge creation. In turn, the improved supply of trained workers in these areas would reduce dependence on expensive expatriate workers and strengthen the continent's development.

**Figure A7.1. *Government Expenditure on Tertiary Education vs. Quality of Tertiary Education***

**

*Source*: UNESCO UIS, http://stats.uis.unesco.org retrieved on March 13, 2018, WEFORUM GCI,

http://reports.weforum.org/global-competitiveness-index-2017-2018 retrieved on March 13, 2018

1. **By promoting and incentivizing access to higher levels of education for women, the proposed project will help break a vicious cycle of poverty.** Returns to higher education across the region are, on average, higher for women than for men. The rate of return for an additional year of schooling in higher education is 15.2 percent for men and 16.8 percent for women. Strategies focusing on improving access to high level education for girls are likely to have more impact on growth and human development. Studies show that the level of education of a mother has a strong positive impact on her child’s performance. Moreover, the SSA region has low numbers of female students enrolled in higher education programs. The enrollment of female students in priority sectors relevant for addressing development challenges of the region is even lower. The latest available data for Mali (Table A7.2), for example, show that of female students enrolled in higher education only 16 percent majored in ICT, 9 percent in Engineering, 14 percent in Agriculture and 38 percent in Health. Côte d’Ivoire has higher numbers than Mali in all four fields. Benin and Ghana have higher numbers in Engineering, Agriculture and Health but similar numbers for ICT. Other emerging economies such as Malaysia have demonstrated much higher female enrollment in all four fields, as has Brazil in ICT and Agriculture.

**Table A7.2. Percentage of Female Student Enrollment in Higher Education by Field of Study (%), 2015**

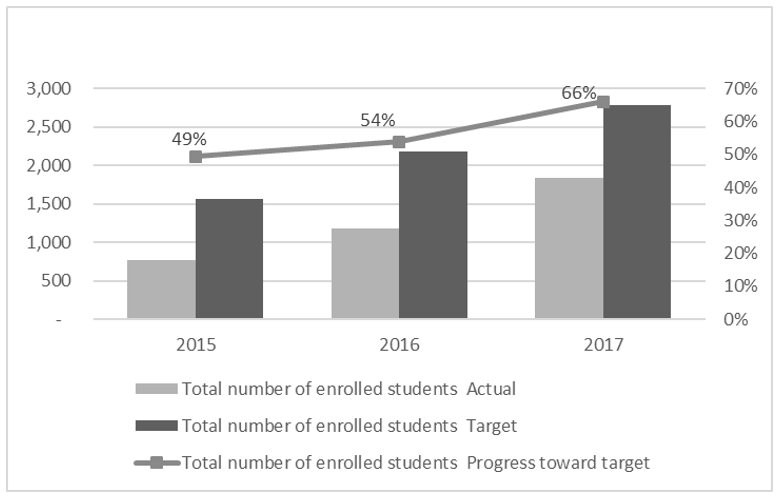
|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Field of Study | **Mali** | **Benin** | **Côte d'Ivoire** | **Ghana** | **Brazil** | **Malaysia** |
| Education | 38 | 26 | 41 | 45 | 20 | 72 |
| Arts and Humanities | 22 | 25 | 35 | 42 | 76 | 58 |
| Social Science | 26 | 26 | 34 | 38 | 92 | 59 |
| Business, Administration and Law | 35 | 40 | 53 | 42 | 9 | 63 |
| Natural Science & Mathematics | 15 | 17 | 18 | 27 | 37 | 53 |
| Information Communication Technologies | **16** | **16** | **24** | **14** | **63** | **45** |
| Engineering, Manufacturing and Construction | **9** | **14** | **19** | **13** | **12** | **35** |
| Agriculture | **14** | **23** | **25** | **23** | **88** | **46** |
| Health and Welfare | **38** | **42** | **43** | **58** | **31** | **70** |
| Services | 11 | 25 | 44 | 88 | 26 | 52 |
| Unspecified fields | 29 | 32 | 40 | 55 | 99 | 44 |
| Total Female Enrolled in TE (number) | 24 246 | 37,215 | 75,933 | 167,141 | 4,727,593 | 718,227 |

*Source:* UNESCO UIS, http://stats.uis.unesco.org retrieved on March 7, 2018.

***Proposed Second ACE Impact Project***

1. **The empirical results on the returns to higher education from the ACE I Project indicate that obtaining a higher education degree is associated with higher earnings[[21]](#footnote-22) (returns are 2.4 percent for Burkina Faso, 30 percent for Cameroon, 30 percent for Ghana, and 15 percent for Nigeria).** The cost-benefit analysis of the main project Component- Component 1 is associated with an IRR of 3 percent in Burkina-Faso, 30 percent in Cameroon, 28 percent in Ghana, and 15 percent in Nigeria. Globally, private returns to higher education (14.6 percent) are higher than the returns to primary education (11.5 percent). The average private return on higher education in SSA is 21 percent, which is the highest compared to other regions, due in large part to the much lower percentage of higher education graduates in SSA. Returns to higher education are on average 21.8 percent in Senegal (2011), and 28.7 percent in Ghana (2012).
2. **Regional mobility of students, peer-to-peer learning, and faculty exchanges can alleviate the lack of adequate educational opportunities in the region and minimize brain-drain.** Leading drivers of student mobility include access to education, the quality of education, employment prospects, and the desire for qualifications with worldwide recognition. A lack of adequate educational opportunities in the home country and the appeal of better opportunities abroad are some of the factors that influence cross-border mobility. The ACE I Project demonstrates strong progress and results toward achievement of project targets in terms of regional mobility of students (see Figure A7.2). These results show that more than 4,000 regional students have been enrolled across the region in ACEs outside their home countries since the project started in 2014.

**Figure A7.2. *Total Number of Regional Students Enrolled in ACEs***



*Source: World Bank calculations using data on ACE I results from The World Bank ACE Team, 2017.*

1. **The project is expected to increase productivity in priority economic sectors.** In most SSA countries, upgrading faculty qualifications is a cost-effective way to improve the quality and relevance of higher education. The project will support a range of faculty improvement activities, including faculty training (innovative pedagogy), faculty exchange/outreach programs and benchmarking. A supply of well-qualified faculty is critical for improving the quality of programs offered, and ultimately the quality of graduates produced and research output. The ACE I Project demonstrates significant progress in the improvement of the quality of programs with 139 education programs accredited through the project, compared to only one program accredited at the beginning in 2014.

**Table A7.3. *Number of Regional and National Faculty Trained in the ACE I Project***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 2014 | 2015 | 2016 | 2017 |
| Regional | 16 | 77 | 67 | 222 |
| National | 105 | 437 | 534 | 1,239 |
| Female | 31 | 116 | 172 | 342 |
| Male | 90 | 398 | 429 | 1,119 |
| TOTAL | 121 | 514 | 601 | 1,461 |

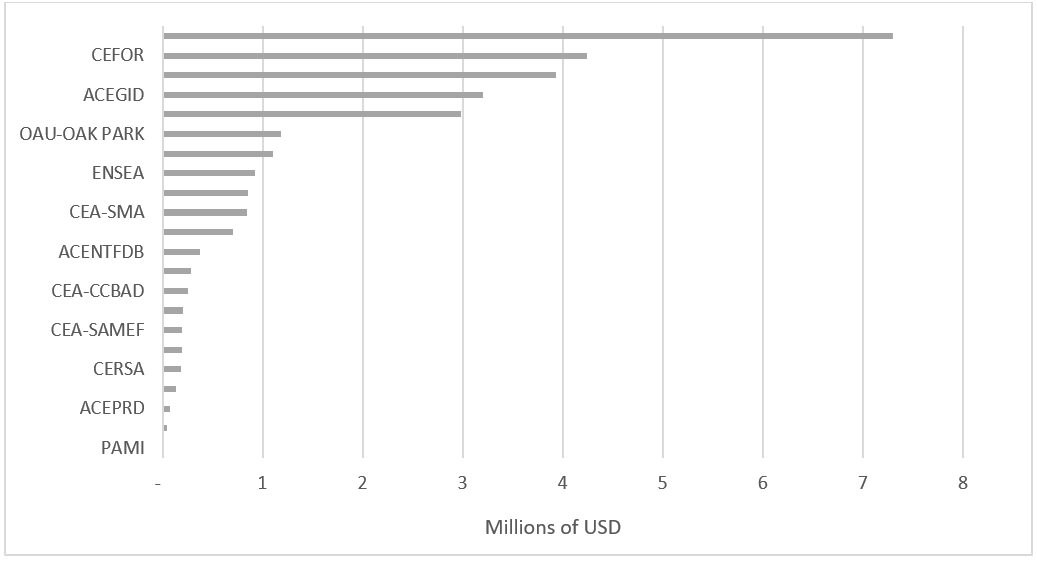
*Source: World Bank calculations using data on ACE I Project results from The World Bank ACE Team, 2017.*

1. **The project will assist ACE Impact centers in improving the current university financing schemes which have been a challenge for most SSA countries.** Higher education, particularly postgraduate education, is expensive and requires continuous investments. By supporting the centers in learning how to generate external revenue, the project will, in the long term, impact the sustainability of the centers and their host universities. This will complement government efforts and help to sustain the transformational change that ACE engenders. To date, over US$50 million in revenue has been generated through the implementation of the ACE I Project. The pace of revenue generation grew from US$0.9 million in 2015 to US$50.7 million in 2019 – three years into project implementation. If this trend continues, revenue generated by ACEs will assist institutions hosting ACEs to achieve a guaranteed return on investment.
2. **The research activities undertaken by ACE centers are essential to addressing the development challenges facing Africa.** While an increase in the quality and quantity of graduates is important, well-defined research programs contribute to the academic mission of the university and to the success of the ACE center. As a regionally-owned project focused on development impact, ACE Impact will train and support African researchers to undertake Africa-centered research. ACE Impact centers will design – with the input of regional and sectoral stakeholders - integrated research programs with specific milestones and deliverables. In addition to publications and reports, master’s and PhD graduates are expected to transfer knowledge to the public and private sectors in thematic areas of critical need. The centers are also designed to serve as regional hubs, with the equipment and expertise necessary to conduct applied research for industry to solve timely problems.
3. **The proposed Second ACE Impact Project builds Africa-focused regional research capacity in West and Central Africa.** By almost any measure, SSA suffers from a lack of resources and productivity in research (UNESCO Science Report: Towards 2030; 2015). With 15 percent of the world’s population, SSA accounts for just 1.3 percent of global R&D spending. Compared to Western Europe and North America (2.4 percent), or East Asia and Pacific (2.1 percent), the percentage of GDP devoted to R&D is just 0.4 percent. This anemic spending – in both the public and private sphere – limits innovation and economic growth, and, in particular, limits African-generated solutions to African challenges.

Scientific publications show similar trends: Africa produces approximately 1 percent of global research publications, and only one-third of those are in the critical STEM fields. While international collaboration on publications is high (approximately 70 percent), this may also be a reflection of donor priorities for research activities and partnerships. Through regional engagement and national government ownership, ACE Impact centers will aim to contribute to research capacity and knowledge in thematic areas that are priorities for Africa.

1. **The ACE I Project has enjoyed some success in producing internationally recognized research outcomes.** Several ACE I centers in Nigeria (ACE in Oil Fields Chemical Research (CEFOR) at the UniPort and ACE for Genomics of Infectious Diseases (ACEGID at RU) and all centers in Ghana has built strong partnerships with both indigenous and multinational industry that has resulted in over US$15 million in external revenues. The Center of Excellence in Water, Energy and Environment at 2iE (Burkina Faso) has published over 100 publications in peer reviewed journals since its launch in 2014.

**Figure A7.3. *External Revenue Generated by ACEs***



*Source: World Bank calculations using data from ACE I Project results from The World Bank ACE Team, 2017.*

1. **The ability of the labor market to absorb a growing labor force with higher education depends not only on economic and job growth but also, critically, on the type of skills that are available to underpin growth.** The implementation of the ACE I Project to date provides strong justification for public sector investment in higher education. The ACE I Project has triggered interest from many countries for support from the WBG, to: (1) develop and sustain their higher education systems, and (2) benefit from ongoing regional specialization initiatives. The Second ACE Impact Project will support recipient countries to invest in regional specialization among participating universities in areas that address selected regional challenges (energy, extractives, agriculture, health, education, housing/urban planning, quantitative economics, transport and ICT) and strengthen their capacity to deliver quality training and produce applied research.
2. **The economic analysis of the proposed project consists of two parts: a cost-benefit analysis, and a financing sustainability analysis.** First, a cost-benefit methodology will be employed to estimate NPV of the proposed project as well as the IRR. It will calculate the net benefits generated by each project Component on an incremental basis. These net benefits are equal to the difference between the incremental benefits and the project costs (both direct and indirect). The incremental benefits are defined as the positive effects induced by the project, notably: (i) increased earnings and improved employment prospects of project beneficiaries; (ii) estimates of the value of improved student learning and the higher quality of education; (iii) estimates of the economic value of reduced skills mismatch; and (iv) cost-savings accruing to regional specialization in higher education. Second, the sustainability analysis will examine the financing of funded university centers to examine the sources of financing for sustainability, including potential fiscal costs, student funding, industry and/or research funding. This analysis will be useful in the World Bank’s advice to the centers and governments to inform policy options for sustainable financing to support quality postgraduate education and research.

***Cost-Benefit Analysis (CBA)***

1. **This section presents an economic analysis of Components 1 and 2 of the proposed project using the cost-benefit methodology: *Establishing New and scaling up well-performing existing Africa Centers of Excellence for Development Impact* and *Fostering Regional Partnerships and Scholarships***. Components 1 and 2 account for the largest quantifiable portion (93 percent) of the project’s total investment with the purpose of improving the labor market outcomes for students in target universities. Component 3 – Enhancing national project facilitation and M&E is non-quantifiable. The main objective of the non-quantifiable portion is to facilitate the effectiveness of the quantifiable portions and, hence, the benefits of the non-quantifiable portion are embodied in the benefits of the quantifiable portions. The economic feasibility of the study is examined through the calculation of an IRR and the NPV. Calculations used aggregated data for SSA countries.

***Project benefits***

1. **This analysis takes into account beneficiaries represented by regional and national students enrolled in programs to be offered at the ACE Impact centers**. External revenues generated by the centers are also considered in the estimation of project benefits. Component 1 principally targets both regional and national students while Component 2 emphasizes the promotion of regional students. The total number of students benefitting from the project was estimated using the non-cumulative target values determined under ACE I, since ACE I and ACE Impact projects have similar scope (22 centers in ACE I and 43 expected centers for the two phases of the ACE Impact Project).
2. **A challenge in calculating both private and social returns to education is the difficulty in objectively measuring the benefits of higher education.** In this analysis, benefits are measured by earnings, a proxy for productivity, but it does not quantify in monetary terms the improvements in the quality of life of the graduates, mobility, and ability of individuals to re-skilled themselves later in life. In calculating social returns to education, it is difficult to capture longer-terms benefits associated with an improved supply of graduates with higher education such as improved economic growth linked to investing in human capital, a workforce better able to adapt technologies that help countries catch-up faster, and investments made possible from higher savings. Consequently, the benefits calculated in this cost-benefit analysis are restricted to salaries only, and disregard a number of externalities such as the impact of graduates on co-workers, productivity improvements, innovation, etc.

***Assumptions***

1. **Several assumptions were considered in the sensitivity analysis. The base-case analysis assumes that the project will achieve 100 percent of the estimated students target value**. For these individuals, the private rates of return are calculated using the assumptions listed below. The benefits are then multiplied by the number of graduates that are expected to enroll in ACE Impact centers’ graduate programs to calculate the cost-benefit analysis estimation. Below is the summary of assumptions adopted for the base scenario:

* **Opportunity cost**—the loss of productive capacity measured as the loss of earnings for individuals that enroll for graduate studies in the Centers of Excellence. The calculation of opportunity costs assumes that students would not be idle or unemployed if they were not enrolled in education.
* **Discount rate**— assumed discount rate of 12 percent based on literature on discount rates that suggest a range of 8 to 12 percent for developing countries.
* **Inflation rate**— inflation is assumed to be zero, so that the wage-experience profiles estimated at one point can be used to calculate life-time wage experience profiles for graduates.
* **Graduates salaries**—it is assumed that the salary of the graduate does not vary from year to year. Annual earnings are calculated by multiplying weekly earnings by 52, monthly earnings by 12, etc.
* **Benefits**—benefits are calculated using the differences in the life-stream of both the treatment and control groups attributable to higher education.
* **Retirement age**—it is assumed that individuals work until they are 60 years-old.
* **Regularity of lectures and courses** – it is assumed that all lectures and courses are delivered on a regular basis (without any interruption such as faculty strike) and that there are no delays in the academic calendar.

1. **Table A7.4 presents the estimated NPV and IRR for the project.** Table A7.4 presents the CBA for the base scenario. Calculations of the IRRs and NPVs for combined estimates of the quantifiable Components for the project demonstrate that the project is economically viable. The present discounted value of benefits for the overall project is estimated to be US$229.7 million. The corresponding NPV of program benefits is US$35.88 million. The IRR associated with this NPV is 24.7 percent. Overall, the cost-benefit ratio estimated that for every US$1 invested there is a return of US$1.2 Consequently, while data to measure all benefits are not available, and given the high opportunity costs for project participants, the NPV derived from quantifiable benefits is greater than the NPV of costs, and the results support investment in the proposed project.

**Table A7.4. NPV and IRR for Component 1 and 2**

|  |  |  |  |
| --- | --- | --- | --- |
| Year | Cost (US$) | Benefits (US$) | Benefits - Costs |
| 2019 | 5,422,667 | 30,376,787 | 24,954,121 |
| 2020 | 24,850,000 | 28,233,294 | 3,383,294 |
| 2021 | 37,611,607 | 36,221,119 | -1,390,488 |
| 2022 | 45,539,700 | 31,927,423 | -13,612,277 |
| 2023 | 42,493,281 | 33,090,936 | -9,402,345 |
| 2024 | 28,783,673 | 34,299,143 | 5,515,470 |
| 2025 | 9,116,658 | 35,553,864 | 26,437,206 |
| Totals (and NPV) | 193,817,586 | 229,702,565 | **35,884,979** |
| IRR |  |  | **24.70%** |

*Source: World Bank calculations using data from The World Bank Development Research Group Poverty and Inequality Team, 2013.*

***Sensitivity Analysis***

1. **The sensitivity analysis relaxes the base-case assumptions to explore IRR under different scenarios.** The sensitivity analysis can be done in different ways, in this case, a lower and upper scenario were conducted assuming lower and higher enrollment rates for beneficiary students.
2. **Lower-bound scenario (assuming 85 percent of the student target value):** Table A7.5 presents projected outcomes if the project achieves 85 percent of its student beneficiary target. While the returns to the project under the lower-case scenario assumptions are lower at 14.5 percent, they remain above the discount rate of 12 percent. Under these assumptions, the CBA demonstrates that the project will still generate positive returns, and for each dollar invested in the project, US$1.14 will be generated in benefits.

**Table A7.5: *Lower-bound Scenario: NPV and IRR***

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | **Cost (US$)** | **Benefits (US$)** | **Benefits - Costs** |
| **2019** | 5,422,667 | 29,427,133 | 24,004,466 |
| **2020** | 24,850,000 | 27,132,842 | 2,282,842 |
| **2021** | 37,611,607 | 35,043,854 | -2,567,753 |
| **2022** | 45,539,700 | 30,835,495 | -14,704,205 |
| **2023** | 42,493,281 | 31,942,190 | -10,551,091 |
| **2024** | 28,783,673 | 33,090,621 | 4,306,948 |
| **2025** | 9,116,658 | 34,282,458 | 25,165,799 |
| **Totals (and NPV)** | 193,817,586 | 221,754,593 | **27,937,007** |
| **IRR** |  |  | **14.54%** |

*Source: World Bank calculations using data from The World Bank Development Research Group Poverty and Inequality Team, 2013.*

1. **Upper-bound scenario:** Under the assumptions adopted in the higher case scenario, as presented in Table A7.6 below, the project yields an IRR of 32.7 percent, higher than the IRR from the base scenario of 24.7 percent. This increase is mostly due to the changes in the number of students enrolled, an assumed over-achievement of the enrolled student target value, as experienced in ACE I Project where 111 percent of the target value was achieved in 2016.

**Table A7.6: *Upper-bound Scenario: NPV and IRR***

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | **Cost** | **Benefits** | **Benefits - Costs** |
| **2019** | 5,422,667 | 31,009,890 | 25,587,224 |
| **2020** | 24,850,000 | 28,966,928 | 4,116,928 |
| **2021** | 37,611,607 | 37,005,962 | (605,645) |
| **2022** | 45,539,700 | 32,655,375 | (12,884,326) |
| **2023** | 42,493,281 | 33,856,767 | (8,636,514) |
| **2024** | 28,783,673 | 35,104,823 | 6,321,151 |
| **2025** | 9,116,658 | 36,401,469 | 27,284,811 |
| **Totals (and NPV)** | 193,817,586 | 235,001,214 | **41,183,628** |
| **IRR** |  |  | **32.74%** |

*Source:* World Bank calculations using data from The World Bank Development Research Group Poverty and Inequality Team, 2013.

***Fiscal sustainability analysis***

1. **The Second ACE Impact Project has developed well-defined mechanisms to ensure sustainable financing for the future of ACE Impact centers.** These mechanisms ensure that the centers are sustainable beyond World Bank funding. Revenue generation – derived from student fees, institutional (and governmental) support, research grants, consulting fees, short courses, corporate partnerships and other sources – is a critical measure ensuring the sustainability of centers. Results from the ACE I Project demonstrate that US$29,376,708 (see Table A7.7) worth of revenue has been generated since the project started in 2014, which is higher than the total funds of US$26,420,377 used by the centers as of 2017. On average, every ACE I center generates US$1,398,891, and for every US$1.00 spent by an ACE I center, US$1.20 is generated.

**Table A7.7. *Distribution of Funds Utilized, and Revenue Generated Across Countries Participating in the ACE I Project***

|  |  |  |
| --- | --- | --- |
| **ACE Country** | **Total IDA Funds as of 2017 US$** | **Revenue Generated (US$)** |
| **Nigeria** | 4,994,069.52 | 10,603,323.29 |
| **Ghana** | 3,278,605.61 | 10,969,015.87 |
| **Senegal** | 1,177,581.32 | 331,492.46 |
| **Benin** | 686,876.55 | 845,437.32 |
| **Burkina Faso** | 1,402,157.86 | 4,123,232.29 |
| **Cameroon** | 689,217.02 | 1,100,000.00 |
| **Togo** | 687,856.01 | 178,516.00 |
| **Côte d'Ivoire`** | 13,504,012.75 | 1,225,691.05 |
| **TOTAL** | **26,420,376.64** | **29,376,708.27** |
| **AVERAGE** | **1,258,113.17** | **1,398,890.87** |
| **RETURN on $ 1** | **1.2** | **1.2** |

1. **The cost of an ACE Impact center represents a small portion of government expenditure on higher education.** The ACE Impact Project will be implemented over a period of four years. Each ACE Impact center will be awarded US$4 to US$6 million at a maximum. If one assumes that in each year center will receive between US$0.8 to 1.2million, this means that each center is equivalent to between 0.91 and 1.37 percent of the Government of Benin’s annual public expenditure on higher education, 0.67 to 1.01 in Burkina Faso, 0.22 to 0.33 percent in Côte d’Ivoire, and 0.14 to 0.21 percent in Ghana (see Table A7.8).

**Table A7.8: *Key Financial Indicators for Higher Education***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Indicator (2013)** | **Benin** | **Burkina Faso** | **Côte d'Ivoire** | **Ghana** |
| [Government expenditure on education as a percentage of GDP (%)](http://data.uis.unesco.org/OECDStat_Metadata/ShowMetadata.ashx?Dataset=EDULIT_DS&Coords=%5bEDULIT_IND%5d.%5bXGDP_FSGOV%5d&ShowOnWeb=true&Lang=en) | 4.55 | 4.59 | 4.73 | 6.10 |
| [Government expenditure on tertiary education as a percentage of GDP](http://data.uis.unesco.org/OECDStat_Metadata/ShowMetadata.ashx?Dataset=EDULIT_DS&Coords=%5bEDULIT_IND%5d.%5bXGDP_5T8_FSGOV%5d&ShowOnWeb=true&Lang=en) (%) | 0.96 | 1.00 | 1.18 | 1.18 |
| [Expenditure on tertiary as a percentage of total government expenditure](http://data.uis.unesco.org/OECDStat_Metadata/ShowMetadata.ashx?Dataset=EDULIT_DS&Coords=%5bEDULIT_IND%5d.%5bXGOVEXP_IMF_5T8%5d&ShowOnWeb=true&Lang=en) (%) | 4.70 | 3.51 | 5.37 | 4.12 |
| [Expenditure on tertiary as a percentage of government expenditure on education (%)](http://data.uis.unesco.org/OECDStat_Metadata/ShowMetadata.ashx?Dataset=EDULIT_DS&Coords=%5bEDULIT_IND%5d.%5bXPUBP_5T8%5d&ShowOnWeb=true&Lang=en) | 21.04 | 21.72 | 24.90 | 19.42 |
| GDP (current US$ ‘000) | 9,156,748 | 11,947,176 | 31,273,049 | 47,805,069 |
| Total expenditure on tertiary education (current US$ ‘000) | 87,596 | 119,198 | 368,199 | 566,136 |
| **Percentage of ACE Impact center’s cost (US$0.8 million) as share of public expenditure on higher education** | **0.91%** | **0.67%** | **0.22%** | **0.14%** |
| **Percentage of ACE Impact center’s cost (US$1.2 million) as share of public expenditure on higher education** | **1.37%** | **1.01%** | **0.33%** | **0.21%** |

*Source: UNESCO UIS, http://stats.uis.unesco.org retrieved on March 8, 2018*

|  |
| --- |
| **ANNEX 8: Partnership Arrangement with AFD** |

1. **In both Nigeria and Benin, the Second ACE Impact Project will be financed jointly by the World Bank and AFD.** Funds from AFD for Nigeria (EUR 35.6 million; equivalent US$40 million) and Benin (EUR 10 million; equivalent US$11.2 million) are expected to be available later in FY20. In both countries, AFD and the World Bank will jointly contribute to the funding of the results in select centers, according to the proportion of their overall funding to each of those centers. The World Bank, through the RFU (AAU), will be providing implementation support through select technical services.
2. **The World Bank and AFD signed a co-financing framework agreement on June 13, 2018, setting forth the basis on which they intend to co-finance projects**. Further, the World Bank and AFD will negotiate and sign a co-financing agreement specific to the proposed Second ACE Impact Project, which will aim to define, among others, services related to the project implementation that the World Bank will provide to AFD and the related fees to be paid by AFD to the World Bank. The following entities will be directly involved in various aspects of the project, including implementation, steering, facilitation and M&E: the PSC, RFU, NSCs, ACE Impact centers, partner academic and research institutions, industry and other sectoral partners and DPs. The roles and responsibilities for each of these players are described in Annex 1 and detailed ToRs are in the POM. The below section details the specific role of the World Bank and AFD in the three countries AFD is financing under the proposed Second ACE Impact project.
3. **Benin.** In Benin, AFD will co-finance EUR 10 million (equivalent US$11.2 million) to the two Centers and School of Engineering in Benin. To mitigate the risk of long delays and as indicated in the Benin-IDA ACE Impact FA, the Co-financing Deadline for the effectiveness of the Co-financing Agreement between the Benin government and AFD is eighteen months from the Effective Date of the Benin-Second ACE Impact FA. The AFD is expected to submit the Benin project to its Board of Directors for approval in January 2020. The World Bank will be the lead agency responsible for all the fiduciary and technical oversight for the project in Benin. Therefore, the World Bank conducted all the fiduciary assessments of the Centers in Benin and also had oversight of the Safeguards tools developed during the project preparation. AFD will be responsible for the disbursement processing for the AFD portion of the project in Benin.
4. **Nigeria.** In Nigeria, AFD will provide financing in the amount of EUR 35.6 million; equivalent to US$40 million. To mitigate the risk of long delays and as indicated in the Nigeria-Second ACE Impact FA, the Co-financing Deadline for the effectiveness of the Co-financing Agreement between the Nigeria government and AFD is eighteen (18) months from the Effective Date of the Nigeria-IDA ACE Impact FA. The AFD is expected to submit the Nigeria project to its Board of Directors for approval in December 2019. The World Bank will be the lead agency responsible for all the fiduciary and technical oversight on the project Nigeria. Therefore, the World Bank conducted all the fiduciary assessments of the Centers in Nigeria and also had oversight of the Safeguards tools developed during project preparation. AFD will be responsible for the disbursement processing for the AFD portion of the project in Nigeria.
5. **Côte d’Ivoire.** The AFD will finance the project in Côte d’Ivoire and will be providing financing to the ACE centers through the Second ACE Impact Project. This complementary project financing of the centers in Côte d’Ivoire will be based on the ACE Impact Project model. Côte d’Ivoire may benefit from technical support on select services through the AAU. These services will include inter alia verification of DLIs; implementation support to centers; capacity building activities; support to ensure Côte d’Ivoire’s participation in regional PSC meetings and technical workshops; etc. However, the AFD will be responsible for all fiduciary aspects of the Côte d’Ivoire centers, including FM, procurement and safeguards. The AFD will have the oversight responsibilities (technical and fiduciary) such that, the World Bank will, for example, not be responsible for the no-objections, the review of the IFRs or procurement audits for the Centers in Côte d’Ivoire. All of these supervision functions will be undertaken by the AFD, given there is no IDA financing for the proposed Second ACE Impact Project in Côte d’Ivoire.
6. **For Benin and Nigeria, the financing of the DLIs will be based on the proportion of the overall financing to the country.** Thus, for example, in the case of Benin, the World Bank is contributing 26 percent of the funding towards the DLIs and AFD is contributing 74 percent of the funding. It is expected that each DLI will be financed based on this proposed allocation. In the case that the AFD financing is delayed and the centers are eligible to receive disbursements, it is possible that the World Bank financing for the achieved DLIs is processed to reflect the availability of only one financier (the World Bank) at the time of disbursement. In such a case, subsequent financing proportion on the disbursement will be updated to reflect the situation. Specific details for each DLI will be provided in the PO. In the case of Nigeria, AFD will provide financing to all Centers except the ACE in Oilfield Chemicals Research (CEFOR), at the UniPort, thus it is expected that AFD will provide financing to a total of 16 Centers in Nigeria. In Nigeria, the financing of the DLIs will be based on a 62 percent contribution from the World Bank and 38 percent contribution from AFD. In case there is a delay in the financing, it is possible that the World Bank financing of the DLI is processed to reflect one financier. As in the case of Benin, if such a situation occurs, the subsequent financing portions of the DLIs will be updated to reflect the delay in the AFD financing.
7. **At the country level, the World Bank will undertake the following technical and fiduciary oversight of the co-financed centers in Benin and Nigeria:**
   * Review and provide no-objections to the implementation plans and annual workplans for the Centers following review by the AAU and comments from AFD;
   * Following submission of the letter of verification from the AAU confirming the achievement of the DLIs, the World Bank will prepare the notice of acceptance of all the DLI achievements and disbursement authorization for the World Bank portion of the DLI to the Centers, with copy to AFD;
   * AFD will be responsible for providing the clearance for the disbursement of the AFD portion of the funds using the notice of acceptance of the DLI achievement issued by the World Bank; and
   * Undertake the social and environmental safeguards assessment and necessary safeguards oversight of the project in Benin and Nigeria.
8. **At the regional level, the World Bank will undertake the technical and fiduciary oversight of the RFU hosted at the AAU**, which will provide the following technical support:
   * Review of the implementation plans, and annual work plans for the Centers
   * Independent verification of the DLIs for the Centers and submission of the verification letters to the World Bank and AFD with copy to the ACEs and national focal points
   * Coordinate at least one annual onsite visit to select ACEs
   * Coordinate the bi-annual project steering committee meetings and regional workshops for all Center participation
   * Provide necessary capacity building activities to the Centers on various higher education and project management topics
   * Undertake M&E to provide bi-annual aggregated and Center-level assessment of the DLIs and project indicators, project progress report and necessary on-site project reports
   * Undertake a project wide MTR with recommendations on improvement of project implementation and design to meet the PDO

***Table A8.1: World Bank and AFD Responsibility and Process Flow During Project Implementation***

***as part of the World Bank-AFD co-financing for Benin and Nigeria***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Process** | **Process Description** | **Preparation Responsibility** | **Reviewing Responsibility** | **Approving Responsibility** | **Comments** |
| 1.0 | Effectiveness Conditions |  |  |  |  |
| 1.1 | PFA (plus legal opinion) between governments and their participating universities | Governments of Benin & Nigeria | World Bank | World Bank | One agreement will cover both the World Bank and AFD funding |
| 1.2 | FA (plus legal opinion) between World Bank and governments of Benin and Nigeria | World Bank | World Bank | World Bank | The World Bank shares its draft financial agreements with AFD to ensure that both financiers’ requirements are aligned |
| 1.3 | FA between AFD and governments of Benin and Nigeria | AFD | AFD | AFD | Aligns with the World Bank financial agreements |
| 1.4 | POM | AAU | World Bank | World Bank | The AAU will incorporate AFD’s comments, if any. Manual also covers Côte d’Ivoire |
| 1.5 | Notice to governments of Nigeria and Benin declaring effectiveness | World Bank (TTL) | World Bank (legal) | World Bank (regional director) |  |
| 2.0 | Financial Management |  |  |  |  |
| 2.1 | Prepare annual work plans and budgets | ACEs in Benin Nigeria and Côte d’Ivoire | AAU experts | World Bank | World Bank will copy AFD on approval |
| 2.2 | Monitoring actual expenditure and commitments against budgets | ACEs in Benin and Nigeria | World Bank | World Bank | World Bank will copy AFD on approval |
| 2.3 | Verification; confirmation of eligibility of expenditure with supporting documents. | ACEs in Benin and Nigeria | World Bank | World Bank | World Bank will copy AFD on approval |
| 2.4 | Preparation of semi-annual IFRs and audited annual Financial Statements, using format acceptable to the World Bank | ACEs in Benin and Nigeria | World Bank (Benin & Nigeria) | World Bank (Benin & Nigeria) | World Bank will copy AFD on approval |
| 2.5 | Financial audit (ToR and acceptance of auditors) | ACEs in Benin and Nigeria | World Bank | World Bank | World Bank will copy AFD on approval |
| 3.0 | Procurement Management |  |  |  |  |
| 3.1 | Procurement Plans | ACEs in Benin and Nigeria | World Bank (quality review, for Benin and Nigeria) |  | World Bank provides quality review  AFD will be copied on feedback to relevant centers |
| 3.2 | Procurement processes follow national or the universities’ own procurement system | ACEs in Benin and Nigeria |  |  |  |
| 3.4 | Procurement audit (ToR and acceptance of auditors) | ACEs in Benin Nigeria | World Bank (Benin & Nigeria) | World Bank (Benin & Nigeria) | World Bank will copy AFD on approval |
| 3.5 | List of eligible vendors |  |  |  | Decide here which list counts, in case blacklisted vendors on the World Bank and AFD lists do not match |
| 4.0 | Monitoring & Evaluation and DLI Verification |  |  |  |  |
| 4.1 | Monitoring project related indicators (results) | ACEs in Benin Nigeria | AAU experts | World Bank | AAU reports approved M&E results to both World Bank and AFD |
| 4.2 | Verification of DLIs (DLRs) | ACEs in Benin Nigeria and Côte d’Ivoire | AAU experts | World Bank | World Bank copies AFD on approval /confirmation email to centers informing them of DLI achievement |
| 5.1 | Setting up reimbursable accounts (approval of banks) | ACEs in Benin Nigeria | World Bank (Benin & Nigeria) | World Bank (Benin & Nigeria) | World Bank will copy AFD on approval |
| 5.2 | Withdrawal Applications | ACEs in Benin; NUC (on behalf of ACEs in Nigeria); | World Bank (Benin & Nigeria) | World Bank (Benin & Nigeria) | World Bank will copy AFD on approval |
| 5.3 | Disbursement of Funds |  |  | World Bank & AFD (Benin & Nigeria) | World Bank will copy AFD on approval |
| 5.4 | Expert reports on supervision visits to centers | AAU experts | World Bank (Benin & Nigeria) | World Bank (Benin & Nigeria) | World Bank will copy AFD on approval |
| 6.0 | Safeguards |  |  |  |  |
| 6.1 | ESMP/ESIA (E&S compliance) | ACEs in Benin, Nigeria | AAU Safeguards Specialist | World Bank | World Bank will copy AFD on approval |

**Table A8.2. *Selected ACE Impact Centers Co-Financed by AFD in Nigeria and Benin (Renewals and New)***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sub-component 1.1: EXISTING AFRICA CENTERS OF EXCELLENCE THAT HAVE BEEN RENEWED (Renewal centers)** | | | | | |
| 1. 1. | ACE: Mathematical Sciences, Computer Science and Applications | University of Abomey Calavi | Benin | Applied math & statistics | STEM |
| 1. 9. | ACE: Genomics of Infectious Diseases (ACEGID) | Redeemer's University | Nigeria | Genomics of infectious diseases | Health |
| 1. 10. | ACE: Neglected Tropical Diseases and Forensic Biotechnology (ACENTDFB) | Ahmadu Bello University | Nigeria | Neglected tropical diseases | Health |
|  | ACE: Reproductive Health Innovation (CERHI) | University of Benin | Nigeria | Reproductive Health | Health |
|  | ACE: Dry Land Agriculture (CDA) | Bayero University, Kano | Nigeria | Dryland Agriculture | Agric |
| 1. 3. | ACE: Food Technology and Research (CEFTER) | Benue State University | Nigeria | Food tech and research | Agric |
|  | ACE: OAU ICT-DRIVEN KNOWLEDGE PARK (OAU-OAK) | Obafemi Awolowo University | Nigeria | Digital Development | STEM |
| **Sub-component 1.2: NEW AFRICA CENTERS OF EXCELLENCE (New centers)** | | | | | |
| 1. 7 | ACE: Water and Sanitation (C2EA) | University of Abomey Calavi | Benin | Water & sanitation | STEM |
|  | ACE: Public Health and Toxicological Research | University of Port Harcourt | Nigeria | Nursing | health |
|  | ACE: Centre for Population Health and Policy | Bayero University, Kano | Nigeria | Nursing | health |
|  | ACE: Covenant Applied Informatics and Communication | Covenant University | Nigeria | Digital Development | STEM |
|  | ACE: Technology Enhanced Learning (ACETEL) | National Open University of Nigeria | Nigeria | Digital Development | STEM |
|  | ACE: Innovative and Transformations Stem Education (CITSE) | Lagos State University | Nigeria | STEM Education | Education |
|  | ACE: Mycotoxin and Food Safety | Federal University of Technology, Minna, Nigeria | Nigeria | Mycotoxin and food safety | Health |
|  | ACE: Drug Research, Herbal Medicine Development and Regulatory Science | University of Lagos | Nigeria | Herbal medicine development and regulation | Health |
|  | ACE: New Pedagogy in Engineering Education (ACENPEE) | Ahmadu Belo University | Nigeria | Engineering education | STEM |
|  | ACE: Sustainable Power and Energy Development (ACE\_SPED) | University of Nigeria Nsukka | Nigeria | Power | STEM |
|  | ACE: Future Energies and Electrochemical Systems | Federal University of Technology, Owerri, Nigeria | Nigeria | Renewable energy | STEM |
| **Add-on: College of Engineering (CoEngg)** | | | | | |
|  | Collège of Engineering: Energy, Transport Infrastructures and Environment (CoE-EIE) | University of Abomey Calavi | Benin | Engineering | STEM |

Note: The Côte d’Ivoire Renewal and New centers to be funded solely by AFD under separate project are:

* 1. ACE: Mining and Mining Environment (CEA-MEM) at INP-HB
  2. ACE: Climate Change, Biodiversity and Sustainable Agriculture (CCBAD) at the UFBH
  3. ACE: Statistics and Quantitative Economics at the ENSEA
  4. New Center: ACE: Valorization of Waste Products with High Value Added (VALOPRO) at the INP-HB.

1. **In addition to co-financing ACEs in Benin, Nigeria and financing a project in Côte d’Ivoire, AFD is preparing a EUR 6 million grant to support regional collaboration activities aligned with the First and Second ACE Impact PDOs, activities and the projects’ broader partnership framework.** AFD’s grant will support building and/or strengthening sustainable research networking between ACEs and other partners on specific topics. Specifically, this grant would support 4-5 thematic networks from the following: (i) mining and the environment; (ii) water; (iii) ICT; (iv) infectious diseases; and (v) sustainable power. The implementation scheme is currently being discussed with the World Bank and the centers to address critical needs (aligned with the DLIs), avoid duplication and minimize complexity. The AFD grant will fund research performing organizations, higher education institutions and quality assurance experts to support these interventions. IRD will serve as the technical coordinating agency for the regional grant. Allocation for the AFD-financed project in Côte d’Ivoire was approved by the AFD Board of Directors in July 2019.

1. The operation is focused on five countries: Benin, The Gambia, Niger, Nigeria and Togo. The AFD will solely finance a complementary project in Côte d’Ivoire. [↑](#footnote-ref-2)
2. “World Bank Group. 2016. Poverty and Shared Prosperity 2016 : Taking on Inequality. Washington, DC: World Bank. © World Bank. https://openknowledge.worldbank.org/handle/10986/25078 License: CC BY 3.0 IGO.” [↑](#footnote-ref-3)
3. Data from The Global Competitiveness Report 2017-2018. [↑](#footnote-ref-4)
4. World Bank Open Data and UNESCO Institute for Statistics. [↑](#footnote-ref-5)
5. The rankings consulted are Times Higher Education, QS World University, and the Shanghai Rankings. An exception is Makerere University, from Uganda, which placed 401-500 in the Times Higher Education Ranking. [↑](#footnote-ref-6)
6. Source: UIS. Share of enrolment in tertiary education, STEM programs, both sexes (number). This is a combination of 3 groups, (1) natural sciences, math and statistics; (2) ICT and (3) Engineering, manufacturing and construction [↑](#footnote-ref-7)
7. http://uis.unesco.org/en/uis-student-flow [↑](#footnote-ref-8)
8. The POM prepared under the First ACE Impact Project has been updated to include elements relevant to the Second ACE Impact and has already been endorsed by several of the countries participating in both the First and Second ACE Impact Projects. [↑](#footnote-ref-9)
9. World Bank. 2018. Africa - Regional integration cooperation assistance strategy for the period FY18-FY23 (English). Washington, D.C. Report No. 121912-AFR : World Bank Group: <http://documents.worldbank.org/curated/en/700111528428661825/Africa-Regional-integration-cooperation-assistance-strategy-for-the-period-FY18-FY23> [↑](#footnote-ref-10)
10. In this project, postgraduate is defined to include master’s and PhD degrees, and short-term professional courses. [↑](#footnote-ref-11)
11. Support for national-level coordination will be provided in Nigeria and The Gambia. [↑](#footnote-ref-12)
12. AFD is solely funding ACEs from Côte d’Ivoire that are not included in this count: 3 ACEs under Sub-component 1.1 and 1 ACE under Sub-component 1.2 [↑](#footnote-ref-13)
13. The term College/School of Engineering (CoEngg) is used generically here, and may refer to a Faculty, a Polytechnic within a university, or other similar organizational structure. [↑](#footnote-ref-14)
14. RSIF scholars will have the opportunity to carry out their PhD work in both their host institutions and in a partner institution abroad. [↑](#footnote-ref-15)
15. World Bank - Africa Higher Education Centers of Excellence (2014): “Project Appraisal Document”, Internet: <https://hubs.worldbank.org/docs/ImageBank/Pages/DocProfile.aspx?nodeid=19316701>, p.97. [↑](#footnote-ref-16)
16. The 5th pillar of the Global Competitiveness Index from WE FORUM (2017) assess the quality of higher education of 137 countries. Scores range from 1 to 7 which is the highest. [↑](#footnote-ref-17)
17. D. Bloom, D. Canning, and K. Chan (2006): “*Higher Education and Economic Development in Africa”* Internet: http://ent.arp.harvard.edu/AfricaHigherEducation/Reports/BloomAndCanning.pdf (Last accessed: March 9, 2018). [↑](#footnote-ref-18)
18. The country-respective ESMFs were disclosed in-country on: Nigeria (November 15, 2018), Togo (August 1, 2019), The Gambia (August 5, 2019), Benin (August 20, 2019), and Niger (August 21, 2019). They were further disclosed by the World Bank on: Togo (August 4, 2019); The Gambia (August 6, 2019); Benin (August 21, 2019); Niger (August 22, 2019); Nigeria (August 22, 2019). [↑](#footnote-ref-19)
19. D. Bloom, D. Canning, and K. Chan (2006): “*Higher Education and Economic Development in Africa”* Internet: http://ent.arp.harvard.edu/AfricaHigherEducation/Reports/BloomAndCanning.pdf (Last accessed: March 9, 2018). [↑](#footnote-ref-20)
20. The 5th pillar of the Global Competitiveness Index from WE FORUM (2017) assess the quality of higher education of 137 countries. Scores range from 1 to 7 with 7 being the highest. [↑](#footnote-ref-21)
21. World Bank - Africa Higher Education Centers of Excellence (2014): “Project Appraisal Document”, Internet: <https://hubs.worldbank.org/docs/ImageBank/Pages/DocProfile.aspx?nodeid=19316701>, p. 97. [↑](#footnote-ref-22)