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Report No: PAD00018

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROGRAM APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF EUR 281.4 MILLION
(US\$300 MILLION EQUIVALENT)

TO THE

KINGDOM OF MOROCCO

FOR A

MOROCCO ACCELERATING THE TRANSFORMATION OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH
OPERATION (P178910)

NOVEMBER 21, 2023

Education Global Practice
Middle East and North Africa Region

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CURRENCY EQUIVALENTS
(Exchange Rate Effective Oct 31, 2023)

Currency Unit = Moroccan Dirham (MAD)

MAD 10.24780 = US\$1

EUR0.93769047 = US\$1

FISCAL YEAR
January 1 - December 31

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ABBREVIATIONS AND ACRONYMS

AfDB	African Development Bank
ANEAQ	National Agency for Evaluation and Quality Assurance of Higher Education and Scientific Research (<i>Agence Nationale d'Évaluation et d'Assurance Qualité de l'Enseignement Supérieur et de la Recherche Scientifique</i>)
ANPMA	National Agency of Medicinal and Aromatic Plants (<i>Agence Nationale des Plantes Médicinales et Aromatiques</i>)
AI	Artificial Intelligence
BOD	Biochemical Oxygen Demand
CCDR	Country Climate and Development Report
CNACES	National Commission for the Coordination of Higher Education (<i>Commission Nationale de Coordination de l'Enseignement Supérieur</i>)
CNCP	National Commission for Public Procurement
CNRST	National Center for Scientific and Technical Research (<i>Centre National pour la Recherche Scientifique et Technique</i>)
CoA	Court of Accounts
COFOG	Classification of the Functions of Government
CPF	Country Partnership Framework
DA	Designated Account
DBAG	Directorate of Budget and General Affairs (<i>Direction du Budget et des Affaires Générales</i>)
DEPP	Directorate for public enterprises and privatization (<i>Direction des Entreprises Publiques et de la Privatisation</i>)
DFIL	Disbursement and Financial Information Letter
DLI	Disbursement-Linked Indicator
DLR	Disbursed-Linked Result
DSSI	Directorate of Strategies and Information Systems (<i>Direction des Stratégies et des Systèmes d'Information</i>)
E&S	Environmental and Social
EIA	Environmental Impact Assessment
ESS	Environmental and Social Standards
ESSA	Environmental and Social Systems Assessment
EU	European Union
FM	Financial Management
GBV	Gender-Based Violence
GDP	Gross Domestic Product
GER	Gross Enrollment Rate
GHG	Greenhouse Gas
GID	Integrated Expenditure Management System (<i>Gestion Intégrée de la Dépense</i>)
GII	Global Innovation Index
GoM	Government of Morocco
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
HCI	Human Capital Index

HCP	High Commission for Planning
HD	Human Development
HE	Higher Education
HEI	Higher Education Institution
IERR	Internal Economic Rate of Return
IFR	Interim Financial Report
IGF	General Inspectorate of Finance (<i>Inspection Générale des Finances</i>)
IGM	General Ministerial Inspection (<i>Inspection Générale du Ministère</i>)
IFSA	Integrated Fiduciary Systems Assessment
INPPLC	National Authority of Probity, Prevention and Fight against Corruption (<i>Instance Nationale de la Probité, de la Prévention et de la Lutte contre la Corruption</i>)
IPF	Investment Project Financing
IRR	Internal Rate of Return
IT	Information Technology
IVA	Independent Verification Agency
KPI	Key Performance Indicator
LFP	Labor Force Participation
M&E	Monitoring and Evaluation
MEF	Ministry of the Economy and Finance
MENA	Middle East and North Africa
MESRSI	Ministry of Higher Education, Scientific Research and Innovation
NAP	National Adaptation Plan
NDC	Nationally Determined Contribution
NDM	New Development Model
OECD	Organisation for Economic Co-operation and Development
OM	Operations Manual
ONOUSC	National Office of Social and Cultural University Works (<i>Office National des Oeuvres Universitaires Sociales et Culturelles</i>)
OPRC	Operational Procurement Review Committee
PA	Paris Alignment
PACTE-ESRI	National Plan for the Acceleration of the Transformation of the Ecosystem of Higher Education, Scientific Research and Innovation (<i>Plan National d'Accélération de la Transformation de l'Ecosystème de l'Enseignement Supérieur, de la Recherche Scientifique et de l'Innovation</i>)
PAP	Program Action Plan
PbC	Performance-based Contract
PDO	Program Development Objective
PdP	Performance Plan (<i>Projet de Performance</i>)
PEF	Program Expenditure Framework
PEFA	Public Expenditure and Financial Accountability
PFM	Public Financial Management
PforR	Program-for-Results
PMT	Program Management Team
PP	Procurement Plan
PPD	Public Procurement Decree

PPSD	Project Procurement Strategy for Development
RA	Results Area
RF	Results Framework
SC	Steering Committee
SDGs	Sustainable Development Goals
SEA/SH	Sexual Exploitation and Abuse/Sexual Harassment
SPD	Standard Procurement Document
STEM	Science, Technology, Engineering and Mathematics
STEP	Systematic Tracking of Exchanges in Procurement
TA	Technical Assistance
TGR	General Treasury of the Kingdom (<i>Trésorerie Générale du Royaume, TGR</i>)
TRI-N	Thematic Research Institutes-Networks (<i>Institut Thématique de Recherche, ITR</i>)
UDC	University Development Contract
UDP	University Development Plan (<i>Plan de développement de l'université</i>)
WB	World Bank



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**DATASHEET****BASIC INFORMATION**

Project Beneficiary(ies)	Operation Name		
Morocco	Morocco Accelerating the Transformation of Higher Education and Scientific Research Operation		
Operation ID	Financing Instrument	Does this operation have an IPF component?	Environmental and Social Risk Classification (IPF Component)
P178910	Program-for-Results Financing (PforR)	Yes	Low

Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Contingent Emergency Response Component (CERC)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Small State(s)	<input type="checkbox"/> Conflict
<input type="checkbox"/> Alternative Procurement Arrangements (APA)	<input type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Hands-on Expanded Implementation Support (HEIS)	

Expected Approval Date	Expected Closing Date
14-Dec-2023	30-Apr-2029
Bank/IFC Collaboration	
No	

Proposed Program Development Objective(s)

To improve labor market relevance of priority programs at public universities and strengthen the governance of higher education and scientific research.

**Organizations**

Borrower: Kingdom of Morocco
Implementing Agency: Ministry of Higher Education, Scientific Research and Innovation (MESRSI)
Contact: Slimane Mehdad
Title: Director of Budget and General Affairs
Telephone No: 212537217501
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COST & FINANCING (US\$, Millions)**Maximizing Finance for Development**

Is this an MFD-Enabling Project (MFD-EP)? No

Is this project Private Capital Enabling (PCE)? No

SUMMARY

Government program Cost	955.75
Total Operation Cost	300.00
Total Program Cost	294.25
IPF Component	5.00
Other Costs	0.75
Total Financing	300.00
Financing Gap	0.00

Financing (US\$, Millions)**World Bank Group Financing**

International Bank for Reconstruction and Development (IBRD)	300.00
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Expected Disbursements (US\$, Millions)



WB Fiscal Year	2024	2025	2026	2027	2028	2029
Annual	0.00	55.46	89.86	88.91	40.19	25.58
Cumulative	0.00	55.46	145.32	234.23	274.42	300.00

PRACTICE AREA(S)**Practice Area (Lead)**

Education

Contributing Practice Areas**CLIMATE****Climate Change and Disaster Screening**

Yes, it has been screened and the results are discussed in the Operation Document

SYSTEMATIC OPERATIONS RISK- RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	Moderate
2. Macroeconomic	Substantial
3. Sector Strategies and Policies	Substantial
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	
10. Overall	Substantial

POLICY 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

Legal Operational Policies**Triggered?**

Projects on International Waterways OP 7.50

No

Projects in Disputed Area OP 7.60

No

ENVIRONMENTAL AND SOCIAL**Environmental and Social Standards Relevance Given its Context at the Time of Appraisal**

E & S Standards	Relevance
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts	Relevant
ESS 10: Stakeholder Engagement and Information Disclosure	Relevant
ESS 2: Labor and Working Conditions	Relevant
ESS 3: Resource Efficiency and Pollution Prevention and Management	Not Currently Relevant
ESS 4: Community Health and Safety	Relevant
ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Not Currently Relevant
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	Not Currently Relevant
ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
ESS 8: Cultural Heritage	Not Currently Relevant
ESS 9: Financial Intermediaries	Not Currently Relevant

NOTE: For further information regarding the World Bank's due diligence assessment of the Project's potential environmental and social risks and impacts, please refer to the Project's Appraisal Environmental and Social Review Summary (ESRS).

LEGAL

**Legal Covenants****Sections and Description**

Schedule 2, Section I, Part A, 1(a): The Borrower shall, through the MESRSI: no later than ninety (90) days after the Effective Date, or such later date as agreed by the Bank, formally appoint and thereafter maintain, throughout the implementation of the Operation, a Program Management Team (“PMT”), responsible for the overall coordination, monitoring and evaluation of the Operation (including the preparation of the Program Reports, Project Reports and consolidated financial statements), and the day-to-day implementation of the Project activities; said PMT with composition and terms of reference acceptable to the Bank, all as set forth in the Operations Manual (OM).

Schedule 2, Section I, Part A, 1(b): The Borrower shall, through the MESRSI: no later than ninety (90) days after the Effective Date, or such later date as agreed by the Bank, establish and thereafter maintain during the period of implementation of the Operation, a steering committee (“Steering Committee”), to be responsible for overall oversight of the Operation, with composition (including representatives from the relevant MESRSI directorates, the MEF, ONOUCS and one or more representative from the public universities) and terms of reference acceptable to the Bank, all as set forth in the OM.

Schedule 2, Section I, Part B, 1: The Borrower shall: (a) through the PMT, no later than ninety (90) days after the Effective Date, or such later date as agreed by the Bank, adopt a manual under terms and conditions acceptable to the Bank (“Operations Manual” or “OM”); and (b) immediately thereafter, carry out the Operation in accordance with the OM. The Borrower shall not amend or waive any provision of the OM without the Bank’s prior written consent. In case of any conflict between the terms of the OM and those of this Agreement, the terms of this Agreement shall prevail.

Conditions

Type	Citation	Description	Financing Source
Disbursement	Schedule 2, Section IV, Part B. 1(b)	Notwithstanding the provisions of Schedule 2, Section IV, Part A, no withdrawal shall be made for DLRs under Categories (1) to (8), until and unless the Borrower has furnished evidence satisfactory to the Bank that said DLR has been achieved.	IBRD/IDA



I. STRATEGIC CONTEXT

A. Country Context

1. **Over the past 20 years, Morocco has made impressive progress in social and economic terms due to large public investments as well as institutional and sector reforms, but growth has slowed since 2010, and poverty reduction has been impacted by multiple exogenous factors.** By 2015, the per capita Gross Domestic Product (GDP) had doubled compared to 2005.¹ This fast-paced growth led to extreme poverty eradication, a substantial drop in the national poverty rate, greater life expectancy, increased access to basic public services, and major public infrastructure development. Regardless of these achievements, rising expectations of Moroccans, especially youth, continue to be unsatisfied. Economic growth has slowed; job creation is insufficient, resulting in a large inactive population; and the labor force participation (LFP) rate is low, especially for women. Real GDP growth was at 1.3 percent in 2022, below the pre-coronavirus disease (COVID-19) trend, estimated to decline to 2.8 percent in 2023.²

2. **The downside of Morocco's growth model has been its reliance on high levels of public investments with a relatively low multiplier effect, which in human development (HD) implied a focus on massively expanding access but not quality of services and inadequate provision of opportunities for youth and the female labor force.** Based on the Human Capital Index (HCI), a child born in Morocco today will only be 50 percent as productive when s/he grows up as s/he could be if s/he enjoyed complete education and full health, lower than the average for the Middle East and North Africa (MENA) region, but higher than other lower-middle-income countries. Between 2010 and 2020, Morocco's HCI increased from 0.47 to 0.50, but learning poverty is high. Though Morocco is benefitting from a demographic dividend (42 percent of the population was below age 25 in 2022),³ the quality of the labor force is relatively low. Despite massive growth in education access, labor force education attainment remains low: 64 percent of the population ages 25 and above had only completed primary school or less in 2021. Around 300,000 working-age people enter the labor market annually, placing pressure on the economy to create sufficient jobs. To offer more quality jobs for youth and increase female LFP, Morocco will need to accelerate economic growth and job creation and build the human capital required to grow and compete in the twenty-first century.

3. **In addition, economies globally are undergoing substantial transformations, with technology, research, and innovation and highly skilled human capital becoming critical elements in driving competitiveness and green growth.** These transformations have led to fundamental changes in the nature of work and demand for skills, notably e.g., in digital technology, and advances in renewable energy. An estimated 50 percent of work activities in Morocco are prone to automation.⁴ Digitalization, automation, and use of low-carbon technologies have reshaped the demand for skills (e.g., artificial intelligence (AI)), leading to the creation of new occupations and to changes in existing job profiles and skills content toward advanced cognitive,⁵ socio-behavioral skills, and skill combinations associated with greater adaptability.

¹ World Bank, Country Economic Memorandum Morocco 2040: Emerging by Investing in Intangible Capital. Poverty measurement is based on the national poverty line.

² World Bank. 2023. Morocco Economic Update: Responding to Supply Shocks, Winter 2022/2023, February 2023.

³ High Commission for Planning (HCP), *Annuaire statistique du Maroc 2022*, and HCP, *Les indicateurs sociaux du Maroc, 2023*.

⁴ 2017 World Economic Forum Report on the Future of Jobs.

⁵ E.g., complex problem-solving and teamwork skills. Studies show that cognitive abilities are closely related to productivity and economic growth (Hanushek, E., and Woessmann, L., 2008. The Role of Cognitive Skills in Economic Development. *Journal of Economic Literature* 46 (3): 607–668).



Morocco faces challenges in developing its digital workforce. In MENA, only 1.7 percent of the workforce are considered digital talents,⁶ and employers (65 percent) believe there is a skills gap.⁷

4. **Addressing the challenges of climate change is critical to ensure economic competitiveness and sustainability in the long term.** Morocco is highly vulnerable to current and future climate variability and change. Its vulnerability and readiness ranking in the 'Notre Dame Global Adaptation Initiative' Index is 70 out of 181 countries.⁸

5. **Slow onset impacts of climate change such as temperature rise are projected to increase across all emission scenarios throughout the end of the century.** Changing rainfall patterns combined with a rise in temperature are expected to increase the arid period and exacerbate drought conditions. As a result, water resources are projected to decline. About 87 percent of total crop production remains primarily rain-fed and thus highly vulnerable to increased rainfall variability. This will have dire implications for food security and rural livelihoods. In the energy sector, temperature rises and heat waves will increase electricity demand. To address climate change challenges, key sectors, including agriculture, water management and energy sectors need to adopt resource efficient practices, in particular water efficient, and align with the country's low carbon pathways. Scaling up renewable energy will be key not only to meet this increased energy demand in the domestic, commercial, and industrial sectors, but also to reduce dependency on imports and help Morocco reach its greenhouse gas (GHG) reduction targets, boost economic growth and enable sustained energy independence.⁹ In addition, it is critical to transition to a diversified economy less reliant on climate conditions. The Morocco Country Climate and Development Report (CCDR) emphasizes the need to prepare workers for future green jobs through skilling, upskilling, and reskilling, by providing incentives to steer education and skills programs toward this shift. Besides technical skills, higher level cognitive skills e.g., problem solving, communication and digital skills are critical to address climate change challenges. Globally, the rise in the demand for workers with green skills,¹⁰ has overtaken supply, and job postings for green skills rose by eight percent per year in the past five years, while the corresponding workforce has only grown at six percent over the same period.¹¹

6. **To address these challenges and accelerate the structural transformation of its economy and growth model, Morocco finalized a New Development Model (NDM) in 2021, prioritizing improvements in human capital and research in priority sectors as catalysts for diversifying its economic output, creating jobs in priority sectors, accelerating economic growth, and addressing and mitigating the impact of climate change.** In HD, the government has embarked on a broad reform, including improvement of education quality, focused on higher education (HE) and university research in collaboration with industry to boost employability in priority sectors including jobs that pertain to reducing GHG emissions and/or boosting climate resilience in agriculture and water management sectors. The NDM emphasizes the relevance of human capital investments, particularly in HE and research, to address climate challenges, protect the most vulnerable, and achieve sustainable growth, which facilitates low-carbon and climate-resilient development. The NDM report highlights the importance of HE governance, accountability and results-orientation.¹²

⁶ Individuals with digital skills, mindsets, and an ability to use digital tools or operate effectively in a digital environment. McKinsey Digitization Index, McKinsey, 2018, The Future of Jobs in the Middle East, January 2018.

⁷ Bayt/YouGov, 2017, The Bayt.com Middle East Skills Report 2017.

⁸ The Notre Dame Global Adaptation Initiative Country Index measures a country's vulnerability to climate change and readiness to improve resilience.

⁹ https://climateknowledgeportal.worldbank.org/sites/default/files/2021-09/15725-WB_Morocco%20Country%20Profile-WEB.pdf.

¹⁰ Technical skills relevant for jobs in the renewable energy and energy efficiency sectors, climate smart agriculture and water management to address water scarcity and allocation in a drought-vulnerable context, preserving biodiversity and forest conservation.

¹¹ LinkedIn. 2023. Global Green Skills Report 2023.

¹² CSMD (Special Commission on the Development Model). 2021. NMD Report, p. 81.



B. Sectoral and Institutional Context

7. **In HE and scientific research, Morocco has accomplished critical successes over the past decade, but for HE and research to play their role in its economic transformation, several critical challenges need to be addressed.** Major achievements include (i) tripling of student enrolment from 2010 to 2018; (ii) high female enrolment, including in science, technology, engineering and mathematics (STEM); and as a result of these two, (iii) increased education levels of the labor force; (iv) emerging centers of academic and research excellence, and (v) substantial growth in international students.¹³ However, the following systematic challenges remain: (i) the rapid enrolment surge without sufficient per student financing to accompany the expansion and inefficiencies, resulting in (ii) quality and relevance deterioration of academic and research programs and low efficiency (high repetition and dropout); (iii) low employability of graduates, partly due to poor coordination mechanisms between universities and industry in adapting academic programs, thus not contributing to a high-skilled labor force and creating dissatisfaction among unemployed graduates; (iv) inequities and pressure on public HE financing; and (v) insufficient autonomy and accountability for results of public universities, hindering efficiencies and performance improvements as well as the mobilization and effective utilization of external resources.

8. **Following the massive expansion of primary and secondary education,¹⁴ Morocco has experienced a dramatic expansion in access to HE over the last decade, with public universities and open access programs absorbing most of this increase.** The number of students enrolled in HE tripled between 2010 and 2022, from 447,036 to 1.3 million students, more than doubling the Gross Enrollment Rate (GER), from 16 percent in 2011 to 39 percent in 2019,¹⁵ with the large majority of students attending public universities.¹⁶ In 2022, 54 percent of students were female, closing (and inverting) the gender gap; and 87 percent of students were enrolled in tuition-free open access programs, in which access is mostly open on a nonselective basis to all *bacheliers*¹⁷ pursuing humanities, law, social science, and economics programs.¹⁸ The remaining 12 percent were enrolled in regulated access programs, with a competitive and selective admission process, which include health sciences, engineering, business management, and technology degrees. Most students pursue law, economics, and social sciences (51 percent); humanities (22 percent); and sciences (26 percent—health and life sciences, engineering, and technology). About 50 percent of engineering students are female, as are 54 percent of students in open access science programs, with the total female STEM enrolment at 55 percent, illustrating an impressive achievement of female enrolment in STEM programs, which offer better job market outcomes. The majority of students are pursuing their first degree, with 91 percent enrolled in Bachelor, five percent in Master's and four percent in PhD programs.

9. **The downside of this massive influx of students has been that the financial, human, and infrastructure resources of universities have not kept pace with it.** Whereas the number of students enrolled in HE doubled from 2013 to 2023, the corresponding budget allocation grew only by 56 percent, resulting in a decline in per student expenditure from 61 to 38 percent of GDP per capita between 2013 and 2023. However, overall HE expenditure as a share of total government education expenditure has been at an appropriate and relatively sustainable level, at 18 percent. HE spending as a share of GDP (1.1 percent estimated for 2023) is higher than the average for Organization for Economic Co-operation and Development (OECD) countries (0.9 percent) and only surpassed by Tunisia (1.6 percent) and Oman (1.3 percent) in MENA. However, total per student spending masks differences in spending across open and regulated access programs, with the

¹³ From 6,000 in 2000 to 23,411 students in 2021, of which 83 percent are African, highlighting the openness and attractiveness of the Moroccan HE system, especially to Sub-Saharan African students.

¹⁴ In 2020–2021, four million pupils attended primary schools and three million children were enrolled in secondary schools, with an increasing share of children completing secondary education (8 percent increase in the number of baccalaureate candidates compared to 2021).

¹⁵ Share of the university-age population enrolled in HE.

¹⁶ Encompasses universities, institutes etc.

¹⁷ Secondary school graduates who passed the end of secondary school leaving exam, i.e. the Baccalaureate.

¹⁸ Ministry of Higher Education, Scientific Research and Innovation (MESRSI) Statistics.



former serving the bulk of students. Recurrent HE expenditures represent 88 percent of total HE expenditures in 2023, leaving little room for capital investments to improve quality. Expenditures directed toward salaries and scholarships have consistently constituted a substantial portion of total HE expenditures, at approximately 67 and 13 percent, respectively. Investments in research have increased substantially but only reached one percent of total HE expenditure in 2022.¹⁹

Quality and Labor Market Relevance

10. **HE investment has not translated into better teaching and learning environments at universities, which have experienced rising student-faculty ratios and surpassed their enrolment capacity in open access programs.** Despite increasing the number of permanent academic staff from 12,036 in 2012 to 15,880 in 2022, the overall student-faculty ratio has remained high, at 70:1 in 2022 (106:1 in open access programs). This ratio varies widely across disciplines and types of institutions. In addition, about 37 percent of academic staff are ages 55 and above, and approximately 3,000 (20 percent) are expected to retire by 2025,²⁰ further increasing the student-faculty ratio. The rapid enrolment growth has resulted in open access programs operating at 259 percent of their capacity (versus regulated access programs at only 77 percent).²¹ In 2023, only three Moroccan public universities reached the top 1,200 universities in global rankings.²²

11. **Overall, academic quality, labor market relevance of degree programs, and support for the job market transition need to be improved to reduce supply-side constraints to graduate employment, though labor market demand-side reforms are critical as the job market does not generate sufficient opportunities for young people, particularly for HE graduates.**²³ While the overall unemployment rate in 2019 was 9 percent, it was considerably higher for youth (25 percent for 15–24-year olds) and youth with tertiary education degrees (59 percent). However, the rate diminished slightly to 42 percent for older, 25–29-year-old HE graduates based on labor force survey data. A 2018 university graduate tracer survey²⁴ found that 68 percent of public university graduates and 79 percent of private university graduates were employed; 13 percent of public university graduates were unemployed, eight percent were inactive, and 11 percent were pursuing further studies. The survey also highlighted gender differences in employment: about 87 percent of male public university graduates were employed compared to 75 percent of female public university graduates. University graduates in STEM-related fields (including health) have better labor market outcomes than economics, law, management, and arts and humanities graduates, particularly women: 54 percent of 25–34-year-old STEM female graduates are employed (versus 37 percent of arts and humanities graduates and 48 percent of economics, law, and management graduates), and 73 percent of STEM male graduates in this age range are employed (versus 60 percent of arts and humanities graduates). This indicates that the labor market relevance of degree programs varies and that the massive influx of students into degree programs with less favorable job prospects constitutes a supply-side constraint. Meanwhile, health and education/pre-service teacher training programs cannot produce graduates in sufficient numbers to meet job market needs. STEM graduates not only have higher employment rates, but their jobs also demand higher skills levels than jobs of graduates from other disciplines (over 75 percent of employed STEM graduates are in high-skill jobs), so they are less likely to be overqualified for their jobs. Overqualification is more pronounced for non-STEM disciplines: 47 percent for economics, law, and commerce and 44 percent for arts and humanities. In terms of gender, female graduates have a higher employment rate in high-skill jobs across all disciplines, with a growing gap for non-STEM graduates, notably in arts and humanities. In addition, 32 percent of Moroccan firms (compared to only 19 percent in Egypt and 10 percent in Jordan) indicated an inadequately educated workforce as major or severe constraint to their business, highlighting supply side

¹⁹ MESRSI.

²⁰ MESRSI.

²¹ Estimated as number of students enrolled as a percentage of available physical spaces for students.

²² Times Higher Education World University Rankings 2023.

²³ Data in this paragraph comes from World Bank 2023, Youth Employment Note, unless otherwise noted.

²⁴ <https://www.csefrs.ma/publications/linsertion-des-laureats-de-lenseignement-superieur/?lang=fr>.



constraints related to the relevance and quality of degree programs, and the lack of preparedness of graduates for the labor market in terms of cross-cutting skills, such as soft, digital, and language skills.²⁵ In addition to supply side interventions, it is important to support graduates' job market transition, e.g., through university career centers and internships.

12. **However, demand-side constraints play an even greater role in youth unemployment, including of HE graduates,** specifically job market functioning and insufficient labor market demand and absorption capacity, due to the relatively small size of the formal economy.²⁶ This means that graduates mostly queue for public or limited private sector jobs. The public sector represents a high share of high-skills jobs for male and female graduates. However, while overall across HE graduates age groups over 40 percent of female and male graduates in high-skill occupations were working in the public sector, only 12 percent in the 25–34 age range were public employees in 2018, indicating generational differences. Regarding disciplines, the private sector is the primary source of high-skill jobs for graduates in economics, law, and commerce. About 50 percent of the high-skill jobs for the 25–34-year-old HE graduates were in education (34 percent), finance and insurance (10 percent), and public administration and defense (nine percent), with slight gender differences. Thus, HE does not only need to prepare graduates for the national labor market, but also for the regional and international labor markets to create greater job opportunities, by enhancing the relevance of degree program offerings and steering prospective students toward programs of study with greater job market prospects; improving degree program content; and providing HE students with transferable soft, language, and digital skills for greater versatility.

13. **Although education improves women's job market outcomes, more targeted efforts are needed to facilitate employability and labor market transition of female graduates.** Female LFP of HE graduates is the highest among all education levels, but it is declining. Overall, female LFP in Morocco was 20 percent in 2022, lower than the average for the region (31 percent) and its income group (50 percent). Female LFP has declined over time at all levels of education (despite a general increase in the quality of the labor force, relatively low fertility, and rising per capita GDP. Male LFP has remained stable, except for those without any schooling.²⁷ LFP of female HE graduates was 64 percent, higher than for female secondary education graduates (34 percent adjusted rates) but lower than for female HE graduates in Egypt (66 percent). However, it is still significantly below that of male graduates and shows a more marked decline than for other women without HE studies (–11 percentage points). Furthermore, young, tertiary-educated women, including those in the 25–29 age cohort, have marginally higher unemployment rates than men.

Research Performance

14. **In addition to quality and relevance challenges, Morocco's research output, while showing promising achievements, needs to further improve to be able to reach its full potential.** For example, the number of citable documents per one million inhabitants was 259 in 2020, compared to 628 (Lebanon) and 710 (Tunisia). The number of researchers per one million inhabitants is lower in Morocco (1,074) than in Tunisia (1,771). In the World Intellectual Property Organization's Global Innovation Index (GII),²⁸ Morocco ranked 70 of 132 countries in 2023. Specifically, scientific research faces the following main challenges:

- (a) **Lack of a critical mass/networks of researchers** collaborating on thematic topics.
- (b) **Low levels of university-industry research partnerships and need to enhance internationalization of research.**

²⁵ 30 percent of the firms who participated in the survey. The survey is a representative sample of Moroccan enterprises.

²⁶ World Bank, 2023, Youth Employment Note.

²⁷ World Bank 2023, Youth Employment Note, and World Bank, 2022, Female Labor Force Participation in Morocco: Constraints and Priority Actions.

²⁸ The GII ranks economies according to their innovation capabilities.



- (c) **Relatively low quality and relevance of PhD programs and low involvement of PhD students in research networks.** About 45,214 students pursued PhDs in 2022, up from 19,585 in 2013, of which approximately 44 percent were women in 2022–2023. Approximately 46 percent of PhDs are in STEM; 26 percent in humanities and social sciences; and 28 percent in law, management, and economics. Several private and public-private partnership universities also offer PhD programs. However, the PhD system has been facing several challenges, notably (i) lack of rigorous selection of PhD candidates, (ii) insufficient program internationalization and quality, (iii) long average PhD completion times (partly due to the necessity for many PhD candidates to work), (iv) high dropout rates, (v) insufficient financial support, (vi) inconducive learning/research environment, and (vii) weak quality assurance of PhD programs.
- (d) **Governance issues**, such as lack of a (i) national scientific research and innovation strategy and consistent standards/accreditation for research centers, affecting the quality of the research environment and ultimately outputs; (ii) structure for fostering thematic research networks across universities in Morocco and internationally; and (iii) insufficient capacity strengthening and support systems for researchers.

Governance and Structure of HE

15. **HE consists of public, private, and public-private partnership institutions.** There are 12 public universities and 78 public non-university Higher Education Institutions (HEIs), five private universities and 129 private HEIs, and five public-private partnership universities created by non-profit foundations. In 2023, 1,095,668 students were enrolled (95 percent in public universities) and 15,880 full-time academic and 8,520 administrative staff employed (88 and 74 percent in public universities, respectively). The system also comprises autonomous public entities under the authority of MESRSI, such as the National Office of Social and Cultural University Works (*Office National des Oeuvres Universitaires Sociales et Culturelles*, ONOUSC), responsible for student housing, dining, health insurance, scholarships, and sports and cultural activities and the National Agency for Evaluation and Quality Assurance of Higher Education and Scientific Research (*Agence Nationale d'Evaluation et d'Assurance Qualité de l'Enseignement Supérieur et de la Recherche Scientifique*, ANEAQ), which has played a key role in building a quality culture based on international standards since 2014.²⁹ The National Center for Scientific and Technical Research (*Centre National pour la Recherche Scientifique et Technique*, CNRST) is responsible for implementing scientific and technological research development programs, while the National Agency of Medicinal and Aromatic Plants (*Agence Nationale des Plantes Médicinales et Aromatiques*, ANPMA) is responsible for scientific research, development, and innovation in the field of medicinal and aromatic plants.

16. **While Morocco has made some progress in setting up a sound governance system for HE, important measures still need to be taken.** International experience shows that a sound HE governance system requires institutional capacity, autonomy and accountability, and sufficient levels of funding as fundamental drivers of university academic and research performance which can enhance graduate labor market outcomes.³⁰ Moroccan universities scored relatively low or average on the level of autonomy in decision-making during a benchmarking exercise across MENA universities.³¹ At the university level, the current institutional framework provides relatively little flexibility for public universities to improve their performance; thus, creating a level playing field for all HEIs would be important for an integrated, well-performing HE system while allowing for diversity of institutional types and missions.

²⁹ ANEAQ is an autonomous institution in charge of evaluating the quality of public and private HEIs and their programs, and research effectiveness.

³⁰ Ritzen, J. 2016. University Autonomy: Improving Educational Output. IZA, World of Labor, March 2016. In a study of European and US universities, good governance and adequate funding were the main determinant of universities in international rankings (see Aghion, P., Dewatripont, M., Hoxby, C.; Mas-Colell, A. and Sapir, A., 2007, Why Reform Europe's Universities? Bruegel Policy Brief, Issue 2007/04, Sept 2007.

³¹ The 2016 University Governance Scorecard Benchmarking initiative highlights their institutional strengths and weaknesses.



17. **The following areas of university governance could be improved in a progressive move toward greater levels of autonomy, accountability, and results-orientation:** (i) streamline institutional governance at the university board level to create more executive and strategic decision making (current boards have a large number of members, often between 60 or more, and are more administrative than strategic, reforms are ongoing); (ii) increase financial autonomy of HEIs to effectively generate and retain nongovernmental revenue and manage recurrent budget expenditures more flexibly and be able to allocate funding to local priorities (e.g., current fiduciary processes make it difficult to use research funds obtained externally and to allocate/administer international scholarships); (iii) build tools and a culture for planning and results monitoring, critical for ensuring autonomy is well managed (e.g., there are limited reliable data on graduate employment, quality, industry-linkages, and research outcomes, and data are often not used to inform strategic decision making); (iv) move towards an institutional funding formula with performance-based elements to promote academic and research excellence and raise the chance of reform success versus solely input-driven funding; and (v) make management of student flows across academic disciplines more effective and efficient by developing a prospective student career orientation, current student reorientation, and HE graduate tracking system to better inform students' and their parents' study choices with regard to job market relevance based on reliable data on employability by discipline/degree program.

18. **At the system level, several areas of governance could be targeted for making the system more effective, equitable, and financially sustainable.** In particular, student scholarships could benefit from more equitable targeting and a more efficient process for selection and management. Approximately 38 percent of undergraduate students benefit from needs-based scholarships. In 2023, 419,445 students received the scholarships. Until the 2023–2024 academic year, the undergraduate scholarships (93 percent of total scholarships) were awarded by provincial commissions with targeting relying on parents' declared income, which tends to be an imprecise indicator given the size of the informal labor market.

C. Relationship to the CPS/CPF and Rationale for Use of Instrument

Relationship to the CPS/CPF

19. **The Operation will contribute to several focus areas of the Country Partnership Framework (CPF) for Morocco 2019–2024 (Report No. 13103; extended to FY2025 with revised Pillar 3 to reflect the focus on climate transition)³² and to the implementation of the NDM's pillar on human capital development.** The Program will contribute notably to (i) the focus area 2, *strengthening human capital*; (ii) the focus area 1, *promoting job creation by the private sector*; and (iii) the focus area 3, *supporting the climate transition*, by helping climate change adaptation through expanded higher-quality research via the creation of Thematic Research Institutes-Networks (TRI-N);³³ and the cross-cutting themes of *governance* and *harnessing the digital economy for jobs and faster growth*, and *promoting gender – empowering women and girls for shared prosperity*, by promoting a conducive environment for female students and researchers. The Program supports the implementation of the NDM on HE and research by interventions centered on capacity building for results-based governance and by enhancing academic and research quality in national priority areas, including a contribution to the *preservation of natural resources and the enhancement of the resilience of territories to climate change* and *safeguarding of water resources through better use of the resource and more rigorous management of its scarcity* under pillar 4 of the NDM, *territories and sustainability*.

20. **The Operation is also consistent with Morocco's 2021 Nationally Determined Contribution (NDC) which lists energy production, industry, housing, waste, agriculture, land management, and forestry as key sectors of its**

³² World Bank. 2023. Performance and Learning Review of the Country Partnership Framework. The pillar on HD remains unchanged.

³³ The TRI-Ns will organize research groups and institutes into thematic networks, bringing together excellent, high-performance research structures in the areas covered by the respective institutes.



adaptation strategy. In the latest NDC submitted to the United Nations Framework Convention on Climate Change, Morocco committed to a 45.5 percent GHG emissions reduction by 2030. The NDC also identifies flood risks and increases in temperature and drought risks as the most significant in terms of potential impacts on human and economic activities. In line with the targets established in the NDC, the Program's activities will have a negligible impact on GHG emissions. Furthermore, the Operation is consistent with the National Adaptation Plan (NAP), which includes (i) climate change strategic governance; (ii) climate knowledge; (iii) assessment, prevention, and reduction of vulnerabilities; and enhancement of (iv) resilience of sensitive resources and ecosystems; and (v) of resilience of production sectors. It is also aligned with Morocco's CCDD which identifies three key areas to help achieve its climate goals: (i) tackling water scarcity and droughts, (ii) enhancing resilience to floods, and (iii) decarbonizing the economy. The Operation will directly contribute to the NDC and NAP objectives by (i) incentivizing research on water and the environment, in general, and climate change mitigation/adaptation, in particular, for the benefit of national economic priority sectors and (ii) by building human capital for and promoting careers in climate change adaptation and supporting the human capital needs for the climate transition.

Choice of Financing Instrument

21. **The Operation will consist of a Program-for-Results (PforR, 98 percent of financing) and an Investment Project Financing (IPF) for Technical Assistance (TA) (2 percent of financing)** to promote the results focus of the well-defined government program, foster stakeholder consensus, boost implementation and monitoring and evaluation (M&E) capacity, and sustainability through use of country systems.

II. PROGRAM DESCRIPTION

A. Government Program

22. **To address challenges in HE and research and implement the NDM, MESRSI launched a transformative and ambitious sector plan in 2023**, the National Plan for the Acceleration of the Transformation of the Ecosystem of Higher Education, Scientific Research and Innovation (*Plan National d'Accélération de la Transformation de l'Ecosystème de l'Enseignement Supérieur, de la Recherche Scientifique et de l'Innovation*, PACTE-ESRI), which was endorsed by the highest level of government. It consists of a comprehensive set of strategic reforms with the potential to transform HE and scientific research, focused on four pillars: (i) academic excellence, (ii) research excellence, (iii) governance and operational excellence, and (iv) innovation (Figure 1).



Figure 1. Key Pillars of the PACTE-ESRI

Pillar 1 Academic Excellence (Quality & Employability)	Pillar 2 Research Excellence	Pillar 3 Operational Excellence & Governance 4.0	Pillar 4 Territories of Innovation
<ul style="list-style-type: none"> • Student orientation • Labor market relevant programs • Employability skills: soft, language, digital • Career centers, entrepreneurship • Graduate employment tracking • Pedagogic reforms (e.g. online learning) • Student life & equity: • Scholarship reform • On campus housing, esp. for female & low income students • Student sports & culture • International student mobility (inbound & outbound) • Inclusion (e.g. students with disabilities) 	<ul style="list-style-type: none"> • National research strategy • Thematic research clusters based on national priorities (water/climate, AI etc.) • Accreditation, labeling system for research institutions • New generation phd program: • Competitive, selective admissions process in specific disciplines in line with needs of research/academia • Internat. mobility of PhD • New modes of financing for research • Reform of admin, procedures for public research funding • Evaluation of research programs • Support to commercialization of research 	<ul style="list-style-type: none"> • Reform of legal framework to facilitate greater university autonomy • University council reform • Financial autonomy of universities & external resource mobilization • Establishment, M&E of university development contracts • National/university performance scorecards • Reform of teachers-researchers status • Re-organization of central admin. • Training of admin staff (national & university level) • Digitization of all admin., academic & research processes • Academic quality assurance 	<ul style="list-style-type: none"> • National innovation strategy • Creation of national innovation fund • Expansion of Cités d'Innovation • Mixed university-industry innovation cells • Youth programs to promote culture of innovation • Activities to promote innovation across ministries • Business climate for off-shoring of research/innovation activities
Cross-cutting levers of change : digital transformation, governance and system performance, legal environment			

23. The plan was finalized in late 2022 following extensive national stakeholder consultations, including with industry and public, public-private partnership, and private universities, which will continue to play an important role during implementation. MESRSI conducted several consultations, each hosted by a different university, with participation by students, faculty, university administrative staff, trade unions, industry, local government, civil society as well as a consultation with the diaspora and industry. Over 3,000 public feedback submissions were received via the PACTE-ESRI website. Given the plan's focus on the relevance of academic programs and graduate employability, universities will be working on developing new academic programs in close collaboration with industry.

24. The implementation of several PACTE-ESRI priority actions has started for the 2022–2023 academic year, e.g., under Pillar 1, new academic programs tailored to job market needs (e.g., in health, education, and industry; under preparation in digital and green and resilient economy) and innovative pedagogical reforms (e.g., hybrid/online learning) were launched. Under Pillar 2, the reform of the PhD cycle and establishment of the TRI-Ns are under way. Under Pillar 3, an organizational audit and a study to inform the development of information management systems were initiated. In addition, as the HE system advances its digital transformation with the PACTE-ESRI, it can rely on strong digital infrastructure and connectivity at university and central levels.³⁴

25. The PACTE-ESRI is funded through a three-year program-based budget and Performance Plan (*Projet de Performance, PdP*). The PdP is organized in four programs (P1 Steering and Governance, P2 Higher Education, P3 Scientific and Technological Research, and P4 Social Assistance to Students), corresponding to key PACTE-ESRI elements.

Development Partner Support

26. The Program is complementary to the planned support for the PACTE-ESRI from the African Development Bank (AfDB) and the European Union (EU). EU support will cover elements of all pillars of the PACTE-ESRI, focused on online

³⁴ Owing to MESRSI's *Connected Campus* initiative in 2021, all public universities are equipped with broadband internet access and online learning hubs, staffed with a coordinator and pedagogical and Information Technology (IT) staff to assist faculty in developing online/hybrid courses, and can access a central online content platform.



teaching/learning, quality, and entrepreneurship, and the AfDB plans to support construction of residence halls, administrative digitization, university career centers, and capacity-building activities.

B. PforR Program Scope

27. **Program boundaries.** The proposed operation will support key elements and incentivize results to increase efficiency in the implementation of select interventions of the PACTE-ESRI (Table 1).

Table 1. Scope of Government program and PforR

Feature	Government program	World Bank-financed Program
Name	PACTE-ESRI	Accelerating the Transformation of Higher Education and Scientific Research Operation
Objective	To prepare and empower generations of professionals, academics, and researchers to tackle future challenges and offer smart solutions that contribute to socio-economic development and human capital accumulation.	To improve labor market relevance of priority programs at public universities and strengthen governance of higher education and scientific research.
Duration	2022–2030	2024– 2029
Coverage	All public and private universities	All 12 public universities
Results Areas (RAs)	Pillar 1 Academic Excellence Pillar 2 Research Excellence Pillar 3 Operational Excellence & Governance 4.0 Pillar 4 Territories of Innovation	Selected interventions under Pillars 1, 2, and 3 RA1: Improving labor market relevance of university programs RA2: Promoting research based on international standards and national priorities RA3: Improving governance at central and university level
Beneficiaries	1,218,687 students and 21,624 academic and 14,613 administrative staff	1,095,668 students and 15,880 academic and 8,520 administrative staff
Financing	US\$7.96 billion	US\$1,250 million

28. **PforR Program scope.** The Program scope amounts to 23 percent of the government program, that is, US\$1.250 billion of a total of US\$7.96 billion, with the Bank financing amounting to US\$294.25 million (Table 2). Activities outside the Program boundary amount to US\$6.7 billion and include mostly salaries and subsidies to universities for operating costs and investments (construction and equipment) not directly related to the Program.

Table 2. Program Costs and Financing Sources (US\$ millions)

Source	Amount	% of Total
Government	955.75	77
IBRD	294.25	23
Total	1,250.0	100

29. **The PforR will support key interventions and reforms in three of the four PACTE-ESRI RAs in which the Bank's value added is expected to be strongest.** The following Program RAs are embedded in the PACTE-ESRI and the PdP.

30. **RA1: Improving labor market relevance of university programs.** Carrying out a program of activities aimed at improving labor market relevance of public university programs by (a) enhancing orientation and reorientation and employment tracking, through: (i) the development of an integrated platform for orientation (for secondary school *bachelier* pupils), re-orientation (for higher education students) and pre-enrolment for open and regulated access university programs with relevant and timely information on academic programs offerings and job/career prospects; (ii) establishing a mechanism for tracking graduate employment by academic discipline; (b) strengthening students'



transferable skills to increase adaptability and employability, through the integration of language and power skills modules (entrepreneurship, digital, and soft skills); and (c) improving university academic programs by updating and expanding existing, and creating new academic programs, to respond to current and future job market needs in, *inter alia*, education, health, digital, and the green and blue economy,³⁵ with a focus on co-creation of new programs with industry.

31. The selection of priority sectors responds to national and international current and future labor demand in HD sectors and the demands of skills identified by the NDM, particularly for digital and green and resilient economy jobs (Annex 2, Technical Assessment, Table 2.1 for Rationale for Selection of Priority Sectors and Labor Market Prospects).

32. RA2. Promoting research based on international standards and national priorities. Carrying out a program of activities aimed at promoting efficiency of scientific research, its commercialization, and technology transfer by (a) launching and implementing the new generation PhD program, through a reform of the doctoral cycle by (i) developing and adopting new academic and scientific standards for the new generation PhD program, (ii) enrolling the top PhD candidates in priority academic and research disciplines, (iii) training the new generation of academics and researchers to strengthen pedagogical and scientific university capacities and address socioeconomic needs, and (iv) evaluating the implementation and outcomes of the new generation PhD program via a report upon graduation of the first cohort and (b) promoting a critical mass of researchers and research commercialization in areas of national priority grouped into thematic research institutes-networks based on international standards, as well as partnerships with industry and international research centers, by: (i) mapping and organizing research groups as members into Thematic Research Institutes-Networks based on specific research quality criteria; (ii) promoting the generation of external financing of Thematic Research Institutes-Networks; (iii) boosting collaboration in international research projects of Thematic Research Institutes-Networks; and (iv) conducting an evaluation of Thematic Research Institutes-Networks to inform their further development.

33. RA3. Improving Governance at Central and University Level. Strengthening the efficiency of higher education and research by enhancing governance at different levels, including through: (a) the development and implementation of a more effective and equitable targeting mechanism for undergraduate needs-based student scholarship program, and the carrying out of an evaluation of the implementation and outcomes of this new targeting mechanism; (b) implementing multi-year MESRSI-public university development contracts indexed to key performance indicators by: (i) adopting university development plans in line with the objectives of the PACTE-ESRI and approving them by their respective university council; (ii) signing university development contracts with MESRSI; (iii) evaluating mid-term the implementation of the signed university development contracts; and (iv) promoting the annual achievement of a set of predefined key performance indicators set forth in the university development contracts by public universities; and (c) strengthening public university fiduciary autonomy and accountability by moving towards implementation of ex post financial control by public universities, through (i) developing and adopting a standardized comprehensive procedures manual for administrative, financial, and procurement management; (ii) establishing and operationalizing an internal audit unit and committee; (iii) generating external (nongovernmental) financial resources; and (iv) fulfilling at least four of the eligibility criteria for ex post financial control.

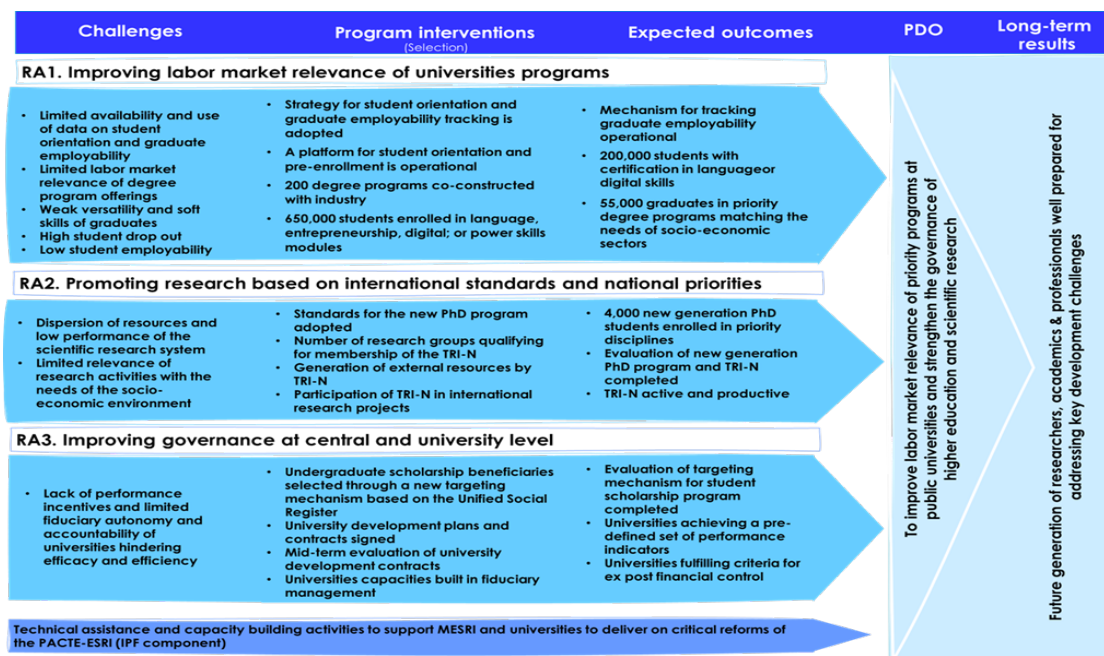
³⁵ Green and resilient economy is defined as low-carbon, resource-efficient, and socially inclusive. In a green and resilient economy, growth in employment and income is driven by public and private investment into such economic activities, infrastructure, and assets that allow reduced carbon emissions and pollution, enhanced energy and resource efficiency, and prevention of the loss of biodiversity and ecosystem services, e.g., sectors such as energy efficiency, renewable energies, green building, and sustainable transport. Blue economy refers to the sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of the ocean ecosystem (World Bank. 2021. *Riding the Blue Wave: Applying the Blue Economy Approach to World Bank Operations*).



C. Theory of Change

34. The Program's design is built on a Theory of Change linking the main challenges, interventions, expected outcomes, and Disbursed-Linked Indicators (DLIs) identified for each of the PforR RAs (Figure 2).

Figure 2. Theory of Change



D. Program Development Objective(s) (PDO) and PDO Level Results Indicators

35. The Program Development Objective (PDO) is to improve labor market relevance of priority programs at public universities and strengthen the governance of higher education and scientific research.³⁶

36. The proposed PDO indicators are as follows:

Table 3. PDO Indicators by PDO Area

RA	PDO Indicators
Labor Market Relevance	<ol style="list-style-type: none"> 1. Mechanism for tracking graduate employability is operational (Disbursement-Linked Result, DLR) 2. Number of students graduated in priority degree programs (DLR)
Research governance	<ol style="list-style-type: none"> 3. Number of international research projects in which one or more research group(s) that are members of Thematic Research Institutes-Networks are participating (DLR)
HE governance	<ol style="list-style-type: none"> 4. Number of public universities that have achieved a predefined set of performance indicators of their annual development indicator targets set forth in the signed development contract (DLR)

³⁶ Governance of research refers to the organization of individual researchers/research groups into TRI-Ns.



E. Disbursement Linked Indicators and Verification Protocols

37. The Program consists of eight DLIs chosen for their potential impact, the Bank value added, suitability for results-based financing, and iterative incentivization of intermediate steps in the form of DLRs toward the final output/outcome (Table 4). DLIs were selected based on their potential to improve HE and research performance. DLRs aim to either provide incentives for prioritization, enhanced stakeholder coordination, and consensus building or reflect Program milestones.

Table 4. Overview of DLIs and DLRs

DLIs	DLRs	Allocation
RA 1 Improving labor market relevance of university programs		
DLI 1. Enhancing student orientation and graduate employment tracking	DLR 1.1: Orientation, re-orientation and graduate employment tracking strategy adopted ³⁷ (US\$4.41 million) DLR 1.2: Online platform for (re-) orientation and university pre-enrolment is operational for (i) regulated access programs (US\$13.24 million); (ii) open access programs (US\$13.24 million) DLR 1.3: Mechanism for tracking graduate employability is operational (US\$13.24 million)	US\$44.14 million 15%
DLI 2. Promoting student employability skills	DLR 2.1: 650,000 students enrolled in: (i) language; or (ii) power skills modules (including entrepreneurship, or digital, or soft skills) (US\$19.86 million) DLR 2.2: 200,000 students obtained a certification in language or digital skills (US\$24.28 million)	US\$44.14 million 15%
DLI 3. Adapting academic programs to the needs of the socio-economic sectors ³⁸	DLR 3.1: 200 additional degree programs co-constructed with industry (US\$7.35 million) DLR 3.2: 120,000 students enrolled in priority degree programs (US\$10.3 million) DLR 3.3: 55,000 students graduated in priority degree programs (US\$11.77 million)	US\$29.43 million 10%
RA 2 Promoting research based on international standards and national priorities		
DLI 4. Implementing the new generation PhD program	DLR 4.1: Scientific and academic standards ³⁹ for the new generation PhD program adopted and published (US\$4.41 million) DLR 4.2: 4,000 doctorants-moniteurs ⁴⁰ students of new generation PhD program enrolled in priority disciplines (US\$17.65 million) DLR 4.3: 500 doctorants-moniteurs students of new generation PhD program enrolled in international mobility programs (US\$4.41 million) DLR 4.4: Evaluation of the new generation PhD program completed (US\$2.94 million)	US\$29.43 million 10%
DLI 5. Promoting Thematic Research Institutes-Networks	DLR 5.1: 30 research groups qualified for membership in the Thematic Research Institutes-Networks (US\$11.77 million) DLR 5.2: 3 percent of financing generated by one Thematic Research Institute-Network is external (US\$4.41 million) DLR 5.3: 12 international research projects in which one or more research group(s) that are members of Thematic Research Institutes-Network(s) are participating (US\$8.83 million) DLR 5.4: Evaluation report of Thematic Research Institutes-Networks completed (US\$4.41 million)	US\$29.43 million 10%
RA 3 Improving governance at central and university level		
DLI 6. Improved targeting of student scholarship program ⁴¹	DLR 6.1: Undergraduate student scholarship beneficiaries selected through a new targeting mechanism based on the Unified Social Register (US\$20.6 million) DLR 6.2: Evaluation of targeting mechanism for undergraduate student scholarship program completed ⁴² (US\$8.83 million)	US\$29.43 million 10%

³⁷ Orientation for secondary school students/graduates (bacheliers) about career paths/university degree program choices; academic and career path re-orientation for current HE students and tracking the employability of HE graduates to inform the orientation/re-orientation.

³⁸ Health, education, green and resilient economy, and digital.

³⁹ Standards include joint national-international co-supervision of PhD programs.

⁴⁰ Doctorants-moniteurs are PhD student-teaching assistants.

⁴¹ To support low-income students and enhance their financial capacity and food security.

⁴² Needs-based undergraduate student scholarships.



DLIs	DLRs	Allocation
DLI 7. Institutionalization of public universities development contracts	DLR 7.1: 12 public universities with development plans aligned with PACTE-ESRI objectives, adopted by their university council (US\$4.41 million) DLR 7.2: 12 development contracts signed between public universities and MESRSI (US\$8.83 million) DLR 7.3: Mid-term evaluation of university development contracts completed (US\$6.62 million) DLR 7.4: 12 public universities have achieved a predefined set of performance indicators of their annual development indicator targets set forth in the signed development contract US\$24.28 million)	US\$44.14 million 15%
DLI 8. Strengthening public universities' financial autonomy and accountability	DLR 8.1: 6 public universities with standard procedures manual for administrative, financial, accounting and procurement management adopted (US\$6.62 million) DLR 8.2: 6 public universities with internal audit unit and audit committee operational (US\$8.83 million) DLR 8.3: 6 public universities with 2 percent of their recurrent expenditures coming from self-generated resources annually (US\$13.24 million) DLR 8.4: 3 public universities have fulfilled at least four criteria for ex post financial control (US\$15.45 million)	US\$44.14 million 15%

38. **Universities play a critical role in helping achieve the main goals of the PACTE-ESRI, including the key DLIs/DLRs supported through the Program.** Universities' performance will be incentivized through the implementation of three-year Performance-based Contracts (PbCs), the University Development Contracts (UDCs), between MESRSI and each university, based on a set of key performance indicators (KPIs) with targets set and pre-agreed between MESRSI and each university. The UDC KPIs are a subset of the performance indicators of the PACTE-ESRI results framework to ensure a strong link and coherence between university and central-level results. The UDCs will be based on each university's plan developed in 2023 based on the PACTE-ESRI in close consultation with MESRSI and key university actors. The university plans detail the activities needed to achieve the UDCs' results. They are in an advanced draft phase expected to be finalized in November 2023. Once the UDCs are signed by the universities and MESRSI (expected in December 2023), they commit not only the universities to achieve the agreed-upon results indicator targets but also MESRSI to ensure financing of the planned university activities needed to achieve the KPIs. An annual joint benchmarking exercise between the universities and MESRSI will take place to take stock of the implementation status of each university's plans/activities and the progress made/level of achievement of the KPIs and to adjust activities and financing accordingly for the following year implementation. Universities showing sufficient progress and performance based on their UDC's KPIs will receive the next tranche of funding. DLI 7 and DLI 8 are designed to incentivize critical milestones in this process and as much as possible address potential constraints such as currently burdensome financial procedures and capacity issues that can impede university performance. Thus, DLI 8 is a designed incentive not only for MESRSI but also for the Ministry of the Economy and Finance (MEF) to help MESRSI and universities resolve critical financial blockages. The Program's Financial Assessment highlights these points. Further analysis by the Bank team is ongoing to inform DLI implementation. Moreover, the IPF-TA and critical fiduciary actions in the Program Action Plan (PAP) will provide capacity-building and analytical activities.

39. **DLIs verification protocols.** The General Ministerial Inspection (*Inspection Générale du Ministère*, IGM) will be responsible for verifying all DLIs according to the verification protocols and Terms of Reference agreed upon between the Bank and MESRSI (Annex 1).

F. IPF Component

40. **The IPF component will provide TA and capacity-building activities to support MESRSI and universities to deliver on critical PACTE-ESRI reforms (US\$5 million, 1.67 percent of the total Operation).** It will finance activities that contribute to improving the efficiency of HE and research and the sustainability of results achieved and inform evidence-based policy making, through (i) consulting services, studies, and evaluations to inform PACTE-ESRI implementation and (ii) capacity building activities for MESRSI, universities, CNRST, ANEAQ, ANPMA, and ONOUCS. The capacity-strengthening activities will benefit public universities while leveraging the expertise and capacities of private and public-private universities, e.g.,



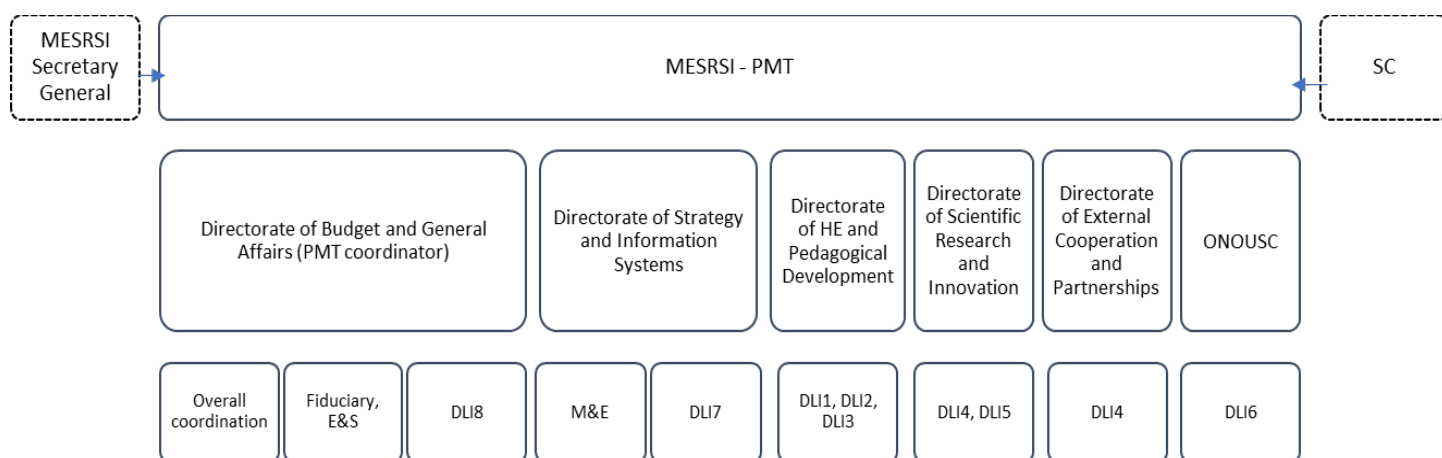
through benchmarking university performance, participating in international research networks, and providing experience sharing among different types of universities and with international universities. The TA includes support to the design of a school career and university career guidance system; development of the scientific, research, and innovation strategy; and fiduciary capacity building, among others.

III. PROGRAM IMPLEMENTATION

A. Institutional and Implementation Arrangements

41. **The implementation arrangements for the Program will mostly follow the PACTE-ESRI implementation arrangements.** MESRSI will be the implementing agency for the Program through a MESRSI Program Management Team (PMT), under the supervision of the MESRSI Secretary General, and in consultation with and guidance from the Steering Committee (SC) for the Operation, consisting of the MESRSI focal point for the Operation and representatives from the universities, ONOUCS, and MEF. The PMT will be led by the Directorate of Budget and General Affairs (*Direction du Budget et des Affaires Générales*, DBAG; responsible for the overall coordination and implementation of DLI 8) and will include team members from the Directorates of Strategy and Information Systems (for M&E, DLI 7), of Higher Education and Pedagogical Development (DLIs 1–3), of Scientific Research and Innovation (DLIs 4–5), and of External Cooperation and Partnerships (DLI 4) and ONOUCS (DLI 6), as well as other relevant MESRSI directorates as needed. The PMT will be responsible for the overall day-to-day program coordination and reporting to the Bank, setting and monitoring of standards and deadlines, coordination among the regulatory/financing agencies and recipient universities, and liaising with and assisting the universities in the implementation of their University Development Plans (*Plan de développement de l'université*, UDPs) in support of the PACTE-ESRI. Each key initiative of the PACTE-ESRI is led by a focal point at the central MESRSI level, as well as at each university. ONOUCS, a public entity reporting to MESRSI, will be responsible for the implementation of the undergraduate student scholarship aspects of the Program, in close collaboration with MESRSI. Universities play a critical role in implementation and helping achieve the DLIs/DLRs through UDPs (see section on DLIs).

Figure 3. Implementation Arrangements



42. **The PMT, led by DBAG, will be responsible for the operation's fiduciary aspects.** It will have the overall fiduciary responsibility of the Bank-funded PforR and IPF in reporting on procurement, financial, and fraud and corruption and the annual external audit. It will include a fiduciary officer ensuring cooperation and consolidation of the Program's financial and procurement information prepared by each university and ONOUCS. The Program will include at MESRSI and university level: (a) appointment/assignment of a fiduciary focal point based on terms of reference acceptable to the Bank



and (b) capacity building activities for the fiduciary focal points assigned to the Operation at MESRSI, universities, and ONOUCS. Through the PMT, MESRSI will oversee the preparation of the Program's consolidated annual financial statements and periodic budget execution reports and monitor the execution of the Program expenditure framework against the DLIs achieved (Annex 3). A Financial Management (FM) officer will be assigned full time to the IPF. The IPF will require preparation of an FM manual as part of the Operations Manual (OM), an annual work program and budget by November every year, as well as opening of a Designated Account (DA) on terms acceptable to the Bank. Unaudited Interim financial reports (IFRs) will be prepared on a semester basis. The ceiling of the DA and the disbursement method are stated in the Disbursement and Financial Information Letter (DFIL).

43. The designated environmental and social (E&S) focal points at the central and university levels will be responsible for ensuring adherence to, and strengthening of, E&S standards of the Operation. At the central level, the designated environmental focal point will be at the MESRSI. Regarding the social aspects of the Program, the MESRSI Directorate of Human Resources focal point will be the central social focal point responsible for monitoring adherence to and reinforcing the implementation of social standards, under the supervision of the MESRSI Director of Human Resources; and closely coordinate with the respective university social focal points, covering gender/gender-based violence (GBV) prevention and social inclusion. The central- and university-level E&S focal points will be trained to undertake Program E&S identification, planning, implementation, and monitoring. The PMT will have the overall responsibility of ensuring that the E&S Technical Manual is prepared and included in the OM.

IPF Implementation Arrangements

44. IPF fiduciary appraisal and implementation arrangements are described in Annex 4. The PMT will implement the Project activities. DBAG, with support from an FM consultant and a procurement consultant, will oversee contract execution and fiduciary management and centrally collect all technical and financial data related to TA with inputs from other MESRSI directorates, which will be used to prepare IFRs and Project reports, and consolidated financial statements for the Project.

45. IPF E&S issues and management. The Bank's Environmental and Social Framework for IPF will apply to the IPF activities. MESRSI prepared an Environmental and Social Commitment Plan for the IPF which was disclosed November 10, 2023. A Stakeholder Engagement Plan proportional to TA activities will be prepared and included as part of the OM.

B. Results Monitoring and Evaluation

46. The Results Framework (RF) provides key measures of the Program achievements against its objectives (Annex 1). The Directorate of Strategies and Information Systems (*Direction des Stratégies et des Systèmes d'Information*, DSSI) will be responsible for M&E, with inputs from universities and ONOUCS. It will consolidate the data and ensure consistency, with an emphasis on DLI results and PAP compliance. The PMT will produce semiannual Program Status Reports based on the RF and other information related to Program implementation, to be submitted to the Bank no later than 45 calendar days after the end of each calendar semester, covering the calendar semester. These semiannual Program reports will provide the basis for the Bank implementation support missions and the midterm review. The PforR will build upon and strengthen the existing, well-established statistics systems and M&E arrangements of MESRSI, ONOUCS, and universities. Two main data sources will yield information for the M&E of the PDO, intermediate results indicators, and DLIs: (a) the Higher Education Information Management System based on the annual university administrative census data, which will be expanded to include PACTE-ESRI intermediate indicators and KPIs, and (b) MESRSI, with input from the universities, which will compile the required information for the M&E plan and the Program reports. Evaluations will also be used for monitoring achievement and adapting interventions.



C. Disbursement Arrangements

47. **The PforR RAs are embedded in the budget and expenditure management processes of the country system.** Program funds will be entirely reflected in the central government budget. All Program payments will be made through the centralized Treasury system of accounts held at the Central Bank (Bank Al-Maghrib). The government, through its budget, will transfer the funds to MESRSI based on the expenditure framework and activities to be executed and thus prefinance the expenditure. The government will claim disbursements from the Bank as DLIs are achieved and validated as per verification protocols. For advances and achieved results, the funds will be disbursed to the government's Treasury Single Account at the Bank Al-Maghrib. The disbursements under the DLIs will be compared with the Program expenditures by the Bank fiduciary and technical teams during implementation to avoid any risk of incoherence in the last year of the Program.

48. **The Bank will agree to advance payment to the borrower in an amount up to US\$69 million of the IBRD PforR financing to complement the government funding to carry out activities toward achieving the DLIs.** When the DLR of a DLI against which an advance has been disbursed is achieved and verified, the Bank will record an amount of the advance as disbursed after it has notified the borrower of its acceptance of the evidence of achievement of the result for which the advance was provided. The amount recovered will become available for further advances. This rolling advance will be adjusted against the claims for disbursement against DLIs. The Bank requires that the borrower refund any advances (or portion of advances) if the DLIs have not been met (or have been only partially met) by the Program closing date, promptly upon notice thereof by the Bank.

D. Capacity Building

49. **The Program supports key capacity building and institutional strengthening required to achieve the PDO.** The World Bank provided TA throughout the Operation's preparation to support MESRSI in refining its interventions, including through a M&E capacity building workshop as well as thematic work sessions with international experts. The sharing of international experiences, combined with a strong policy dialogue focused on specific country needs, paved the way for good practices to be incorporated into the Program design. By the end of the Operation, it is expected that MESRSI and the universities will have a system that generates reliable and disaggregated data on graduate employability to inform student orientation and university degree programs (DLI 1); strengthened academic and scientific capabilities of human resources through the new generation PhD students (DLI 4); active research networks pooling thematic expertise and resources aligned with national development challenges contributing to greater efficiency of the scientific research system (DLI 5); better targeted scholarship programs leading to more efficient use of public funding (DLI 6); contractualization mechanism in place conducive to greater accountability and performance at university level (DLI 7); and strengthened fiduciary capacities at the university level, reflected by universities' eligibility to a posteriori financial control and greater autonomy (DLI 8). The IPF component will support the implementation of the PforR through key capacity-building activities.



IV. ASSESSMENT SUMMARY

A. Technical (including program economic evaluation)⁴³

Strategic Relevance

50. **The Program is strategically relevant and key for supporting the NDM.** HE is instrumental in fostering growth, reducing poverty, boosting shared prosperity, and a green resilient growth. A highly skilled workforce is a prerequisite for innovation and a climate-resilient and low-carbon growth: well-educated people are more employable and productive, earn higher wages, and cope with economic shocks and challenges posed by climate change better. Transitioning to a low-carbon economy also provides an opportunity to boost job creation and ensure industry competitiveness in the long term. Economic returns for HE graduates are the highest of all education levels, an estimated 17 percent increase in earnings.⁴⁴ Investments in HE are strategic for Morocco's NDM, as they can act as a catalyst through promoting skilled human capital, preparing the workforce for a green economy future, and boosting research capacity for the green and digital economy; through technology absorption and innovation spillover effects; and through positive social outcomes such as greater female LFP,⁴⁵ improved health, higher civic participation, good governance, and environmental protection.⁴⁶ Given Morocco's educational and middle-income status, HE plays a critical role in improving youth employment, raising salaries, and boosting scientific and technological capabilities.

Technical Soundness

51. **The Operation was designed to contribute to key results of the government program and achieve the PDO, drawing on evidence and global good practices.** Its design is based on a robust Theory of Change focusing on key interventions targeting relevance of academic programs (RA 1), scientific research (RA 2), and governance (RA 3). By promoting HE relevance, governance, and scientific research, the Operation is aligned with the recommendations from several key Bank HE reports⁴⁷ and the Education Strategy 2020.⁴⁸

52. **Paris Alignment (PA).** The Operation is aligned with the goals of the Paris Agreement (PA) on both adaptation and mitigation.

- **Assessment and reduction of mitigation risks.** The Operation has a low risk of preventing Morocco's transition to low-carbon development pathways given its support to activities that have a negligible impact on GHG emissions and as such are universally aligned. All the selected DLIs could be considered universally aligned for HE according to current

⁴³ See annex 2 for an extended summary of the Technical Assessment.

⁴⁴ World Bank. 2021. *Understanding Poverty: Development Topics: Higher Education*.

⁴⁵ Female university graduates have the highest LFP rate of all education levels in Morocco. This pattern is consistent across MENA, e.g., Tunisia and Egypt.

⁴⁶ OECD, 2012 *Equity and Quality in Education: Supporting Disadvantaged Students and Schools*, OECD Publishing, Paris, 2012; McMahon, W.; and Oketch, M., 2013, *Education's Effects on Individual Life Chances and on Development: An Overview*, March 2013, *British Journal of Educational Studies* 61(1):79-107; Oketch, M., McCowan, T., and Schendel, R., 2014, *The Impact of Tertiary Education on Development: A Rigorous Literature Review*, *Rigorous Literature Reviews in Education*. Department for International Development (DFID): London.

⁴⁷ *Steering Tertiary Education: Toward Resilient Systems that Deliver for All* (Report No. 164426), *Expectations and Aspirations: A New Framework for Education in Middle East and North Africa* (Report No. 131974).

⁴⁸ *Learning for All – Investing in People's Knowledge and Skills to Promote Development*.



PA methodologies,⁴⁹ as they support activities to enhance HE quality (DLI 1, DLI 2, DLI 3), build research capacity (DLI 4, DLI 5), and foster skills development to enhance employability (DLI 1, DLI 2, DLI 3), thus promoting skills development in universally aligned activities aimed at reskilling workers and enabling the low carbon transition, while supporting activities that improve scholarship system targeting and efficiency (DLI 6) and HE governance (DLI 7, DLI 8). The Operation does not include any infrastructure works and, as such, can be considered aligned.

- **Assessment and reduction of adaptation risks.** A Climate Change and Disaster Risk screening and the PA assessment have been carried out. The main climate and disaster risks in Morocco are floods, landslides, extreme heat, and wildfires. These climate-induced events pose some risks to the Operation activities, mainly through potential interruptions to HE service delivery. The Operation design mitigates these risks through the digitalization and online provision of supported activities (career guidance, orientation and reorientation platform, and scholarship enrolment), providing more resilience to service delivery. Therefore, low adaptation risks are further mitigated.

Program Expenditure Framework

53. **MESRSI's budget for 2023 is over MAD 15 billion (US\$1.5 billion), around 3.6 percent of the general government budget.** The total budget of MESRSI rose by 33.1 percent over the past four years, from US\$1.13 billion in 2019 to over US\$1.5 billion in the 2023 Budget Law, mainly due to a 39.1 percent increase in payroll and a 36.2 percent increase in capital expenditure. The PdP 2023–2025 assumes an annual nominal growth rate of 7.5 percent, demonstrating funding predictability, commitment, and sustainability (see full Technical Assessment for detailed macro-fiscal context) and demonstrating an improved commitment to the success of a comprehensive reform agenda in HE and scientific research.

54. **The Program Expenditure Framework (PEF) includes line items from the MESRSI budget across three of the four programs in the program-based budget,** with the exclusion of large-scale civil works and budget lines outside of the Program scope (Table 5). Relevant lines include the operating budget for universities to implement new programs under the PACTE-ESRI, for scientific research, and for new generation PhD and undergraduate student scholarships. Investments with potential to cause significant adverse impact on the environment and/or affected people, as defined in the Bank Policy and Directive on PforR financing, are excluded. The five-year cost for the Program is estimated at US\$1.250 billion⁵⁰. Risks to the PEF arising from budget constraints are low, as it is aligned with government priorities, constitutes a small portion of the program cost, and is implemented within a strong macroeconomic framework with sufficient predictability and high budget execution rates.

Table 5. Summary of Program Expenditure Framework

RA	Budget category	Program budget	Activity	Total for 2024 (MAD)
RA1	Operating budget	907	Operating grant 'subsidies' to universities to increase the density of healthcare personnel by 2030.	62,414,000
RA1	Operating budget	907	Operating grant 'subsidies' to universities as part of a program to train primary and secondary school teachers by 2025.	186,000,000
RA2	Operating Budget	908	Common services – scientific research subsidy	50,000,000
RA2	Operating budget	908	Training of the new generation of doctoral researchers – operating grant to universities	180,000,000
RA3	Operating budget	909	Common services – granting of scholarships and lump-sum allowances – operating grant "subsidies" to ONOUCS for study scholarships in Morocco.	2,023,000,000

⁴⁹ Joint MDB Methodological Principles for Assessment of Paris Agreement Alignment of New operations and Education Sector Note on Applying the World Bank Group Paris Alignment Assessment Methods (English). Washington, DC, World Bank Group.

⁵⁰ The Program duration is five years and spans over six calendar years.



RA	Budget category	Program budget	Activity	Total for 2024 (MAD)
Total, 1 year, MAD				2,501,414,000
Total, 1 year, US\$				250,141,400
Total, 5 years, US\$				1,250,707,000

Economic Justification

55. **Rationale for public investment and economic returns.** Three factors provide a rationale for public financing of the interventions supported by the Operation. First, education generates positive externalities on the society by increasing productivity and economic growth. If individuals do not take these benefits into account when making education investment decisions, public sector investments can lead to efficiency gains. Second, imperfect information makes individuals unaware of the relevance of education in future labor opportunities and, even if aware, financial constraints might prevent them from financing these investments. Third, the HE system has the potential to promote equality of opportunities. Since dropout and labor market outcomes are particularly relevant for disadvantaged students, any policy aimed at improving these outcomes benefit vulnerable groups and is therefore desirable from an equity perspective. An economic analysis of the Operation shows positive results in the cost-benefit analysis, and the Internal Economic Rate of Return (IERR): benefits exceed 5.9 times their cost, yielding a positive IERR (17 percent), and remain positive under several sensitivity analyses (Annex 2). Governance and research interventions are not included in the Internal Rate of Return (IRR) given the difficulty in estimating their monetary impact. The benefits of these interventions, as well as the positive social externalities of improved access and retention to labor market relevant HE programs, such as equity, welfare, and intergenerational mobility, would increase the calculated net present value and IERR.

56. **Distributional impact and externalities.** The Operation aims to close income inequities in access to quality HE. It will enhance the targeting of scholarships to low-income students through greater efficiency and transparency in the selection of beneficiaries. The efficiency gains enable smarter and more equitable investments, benefitting the most vulnerable. Information interventions and career guidance are particularly relevant for disadvantaged students who are often the first generation in their family to attend HE and may lack support to make informed choices, and to nonacademically ready students that lack basic skills to advance in their education trajectories. From a social perspective, the Operation would raise human capital endowment, boosting growth and reducing poverty, and, through a more educated population, reach better health outcomes, less crime, higher democratic participation, environmental consciousness, civic participation, and earnings, resulting in higher tax revenues.⁵¹ HE also promotes research and innovation, critical in economic development and competitiveness and in the context of the global economic transformations under way.⁵² Finally, improving PhD programs can have spillover effects on the regional research environment, as Morocco is a key destination for students pursuing PhDs.

⁵¹ OECD, 2012 Equity and Quality in Education: Supporting Disadvantaged Students and Schools, OECD Publishing, Paris, 2012; McMahon, W.; and Oketch, M., 2013, Education's Effects on Individual Life Chances and on Development: An Overview, March 2013, British Journal of Educational Studies 61(1):79-107; Oketch, M., McCowan, T., and Schendel, R., 2014, The Impact of Tertiary Education on Development: A Rigorous Literature Review, Rigorous Literature Reviews in Education. Department for International Development (DFID): London.

⁵² See Romer, P., 1987, Growth Based on Increasing Returns Due to Specialization, *The American Economic Review*, Vol. 77, No. 2, Papers and Proceedings of the Ninety-Ninth Annual Meeting of the American Economic Association (May, 1987), pp. 56-62; Romer, P., 1990, Endogenous Technological Change, *Journal of Political Economy*, Vol. 98, No. 5, Part 2: The Problem of Development: A Conference of the Institute for the Study of Free Enterprise Systems (Oct., 1990), pp. S71-S102; Aghion, P. and Howitt, P., 1992, A Model of Growth Through Creative Destruction, *Econometrica*, Vol. 60, No. 2 (Mar., 1992), pp. 323-351; Grossman, G. and Helpman, E., 1991, Trade, Knowledge Spillovers, and Growth, *European Economic Review* Volume 35, Issues 2-3, April 1991, Pages 517-526; and Barro, R.J. and Sala-i-Martin, X., 2004, *Economic Growth* Second Edition, The MIT Press, Cambridge, Massachusetts.



57. **Bank value added.** The Bank has broad experience in modernizing HE systems in MENA and other regions. It can leverage its global technical knowledge to support the reform, including to (i) provide the know-how for results monitoring and results-oriented HE financing; (ii) build university capacity to mobilize external financing; (iii) support analysis on female LFP and employment and linkages with economy-wide policies; (iv) advise on and use synergies across operations of cross-sectoral linkages; and (v) ensure continuity in student learning from early childhood through HE. This Operation also draws on the lessons learned of the active education portfolio of lending and analytics in Morocco.

B. Fiduciary

58. **An Integrated Fiduciary Systems Assessment (IFSA) of the Program was conducted following the Bank Policy on PforR Financing, which concluded that the existing fiduciary systems of implementing entities meet Bank PforR financing requirements, subject to implementation of the agreed fiduciary mitigation measures and actions in the PAP.** The internal controls of the implementing entities' fiduciary systems provide reasonable assurance that financing proceeds will be used to support the achievement of Program objectives, with due attention to the principles of economy, efficiency, effectiveness, transparency, and accountability. Public Financial Management (PFM), including country procurement systems followed by the entities and assessed by the IFSA, is acceptable to the Bank and meets the requirements for implementing a PforR. For the entities assessed, there is a strong legal and institutional framework, effective PFM planning and budget systems, and acceptable internal control systems with clear and relevant segregations of duties at each step of the budget execution. Additionally, the new Public Procurement Decree (PPD) No. 2-22-431 of March 8, 2023,⁵³ which will govern universities' procurement under the Program as of September 1, 2023, includes several enhancements, and its implementation will result in higher value for money with adequate levels of transparency, competitiveness, efficiency, and fairness by all Program entities.

59. **The overall fiduciary risk is deemed to be Substantial, and appropriate mitigation measures are included in the PAP** (see risk section and Annex 6).

60. **While universities have acceptable systems in place to meet the Program FM requirements, they are under the ex-ante financial control arrangements of the public administration, which impact their autonomy, ability to use funds (including externally generated revenue), flexibility, and ultimately their performance.** To date none of the public universities has met the minimum conditions required for the introduction of an ex post financial control. Achieving this objective, though possible, will be a matter of overcoming two major challenges: general accounting (double-entry accounting system), enabling annual financial statements to be drawn up and audited by statutory auditors, and the operationalization of the internal audit function and audit committees as required by law. It is important to note that at present, only budgetary accounting is in place in universities. There is no general accounting or double-entry bookkeeping to draw up financial statements showing the university assets and liabilities. DLI 8 aims to help address some of these challenges.

61. **The PAP includes specific, time-bound actions aimed at mitigating fiduciary risks, ensuring adequate budget and procurement execution of the PEF, effective accountability and transparency mechanisms, and achievement of expected results.** The PforR instrument provides an opportunity to strengthen the transparency and predictability of resources, budget execution, and anti-corruption mechanisms. Existing systems in implementing entities will require capacity and systems strengthening to ensure adequate and timely budget planning and execution, effective

⁵³ Approved by the Council of Government on December 29, 2022, and published in the Official Bulletin No. 7176 dated March 9, 2023. The PPD is in place since September 1, 2023, and replaced the Decree No. 2-12-349 (dated March 20, 2013). Additionally, universities' procurement will be governed by the new PPD instead of specific procurement regulations.



accountability, and achievement of expected results. The procurement- and FM-related risks will be addressed through key actions in the PAP (Annex 6).

62. **The implementing entities will execute the activities following the Bank's "Guidelines on Preventing and Combating Fraud and Corruption in Program-for-Results Financing" (dated February 1, 2012, revised July 10, 2015).** The Program ex-ante and ex-post arrangements were found adequate to address the risk of fraud and corruption. With support from the institutions in charge of the fight against corruption (e.g., *Instance Nationale de la Probité, de la Prévention et de la Lutte contre la Corruption*, INPPLC), the PMT will share information with the Bank regarding all allegations of fraud and corruption in connection with the Program together with the semiannual Program reports, investigate all credible allegations received, report to the Bank on actions taken, and cooperate in any inquiry that the Bank may conduct into allegations or other indications of fraud and corruption in connection with the Program. Implementing entities will monitor and abide by the Bank's debarred/suspended firms list. A protocol/arrangement on compliance with the Anti-Corruption Guidelines during Program implementation will be included in the OM, including the format and content of the reporting on fraud and corruption. It is important to underline that arrangements at the global portfolio level for the management of governance, fraud, and corruption aspects are being discussed with the government and could apply to this Program as soon as the memorandum of understanding is signed and implemented.

63. **FM arrangements for IPF component.** The PMT is not familiar with the Bank FM procedures and requirements. Arrangements for the IPF are similar to those already in place in the portfolio, notably (i) opening a DA at the Central Bank on terms acceptable to the Bank (e.g., ceiling and disbursement methods are stated in the DFIL), (ii) setting up management tools, (iii) preparing a work plan and annual budget, and (iv) preparing periodic financial and annual audit reports due nine months following the end of each calendar year (see Annex 4 for detailed FM arrangements for the IPF).

64. **Procurement exclusion.** The Program is not expected to procure any large contracts valued at or above the Operational Procurement Review Committee (OPRC) thresholds (US\$75 million for works, US\$50 million for goods and non-consulting services, and US\$20 million for consultant services), which are based on a Substantial risk rating. This conclusion is drawn based on an analysis of procurement data of the agencies.

C. Environmental and Social

65. **An Environmental and Social Systems Assessment (ESSA) was undertaken by the Bank as part of the preparation of the PforR, and that the Program will generate positive social effects and E&S benefits expected to be sustained long term.** The ESSA examines the extent to which the Government's existing E&S management systems can guide the Program's E&S impact assessments, mitigation, management, and monitoring of E&S risks.⁵⁴ A review of the E&S risks of the proposed activities was undertaken at the design stage to confirm that no activities meeting the defined exclusion criteria are included, in line with the Bank's ESSA guidelines, and establish the initial ESSA scope.⁵⁵ In terms of social benefits, the Program is expected to create better-informed choices of academic programs and career orientation and enhance student employability by demonstrating their expertise to potential employers and contribute to a greater alignment of the HE system with the socioeconomic needs of the country and regions. The Program also aims at improving the targeting of scholarships as well as evaluating the impact of scholarship programs on HE outcomes. In terms of

⁵⁴ The evaluation was prepared by the World Bank team through a combination of detailed reviews of program documents; available technical literature, including government policies and regulations; and in-depth interviews and consultations with government staff and HE and research experts.

⁵⁵ This includes identifying relevant systems within the PforR and relevant stakeholders for engagement and consultation.



environmental benefits, the Program will have a positive leverage effect via the encouragement of research themes to solve problems linked to environment and climate change mitigation/adaptation challenges.

66. **The overall E&S risk is moderate.** The potential adverse environmental effects of the proposed activities are low to moderate. The environmental risks are linked to the management of emergency situations (fire, earthquake, and so on). The mitigation measures are well established, and their implementation will make it possible to avoid negative impacts. The social risks associated with the proposed activities are moderate to substantial. The moderate risks are particularly related to social inclusion. The risk of social exclusion of people with disabilities is to be considered as only 1.6 percent of them achieved a higher level of education (baccalaureate and above). Exclusion based on linguistic background is another risk to be considered in the design and implementation stages given that students, particularly those from public schools and rural areas, encounter difficulties with foreign languages (mostly French), which begin to manifest at an early age and solidify as they enter university. Sexual harassment (SH) and sexual exploitation and abuse (SEA), on the other hand, were rated as a substantial risk. SH can manifest in different forms and contexts against female staff and faculty whereas SEA occurs particularly against female university students. That said, female PhD students are vulnerable to SEA due to their individual academic relationships with male mentors and professors.

D. Corporate Requirements

67. **Gender.** Morocco has made considerable progress in closing gender gaps in education access, including in HE, but much remains to be done to improve female LFP and unemployment of female HE graduates. While female students comprise a large share of the total students enrolled in STEM programs, only one in five new female students chooses a STEM career, despite higher economic returns and labor market prospects of these degrees (Figure 7B, Technical Assessment).⁵⁶ Reasons behind fewer new students entering STEM fields of study vary, including lack of career guidance, access to knowledge about job prospects in such fields, and lack of confidence or role models among other constraints not fully identified due to lack of data.⁵⁷ Additional barriers include widespread GBV in the workplace and public spaces, unsafe transport, time poverty due to household/family and childcare responsibilities, and social norms. This Operation aims to close this gap by attracting more new female students to STEM careers with specific evidence-based interventions⁵⁸ tackling information barriers and improving socio-emotional skills of female students (Table 6, Technical Assessment). Specifically, the project aims to provide career guidance through orientation platforms and establish a graduate tracking employability system disaggregated by gender to update the platform in real time, among other activities (Table 8.1, Annex 8).

68. **Climate Change.** The Operation intends to address challenges posed by climate risks and support a green transition through (i) incentivizing priority degrees in green and climate resilient economy; (ii) supporting research on climate change to develop quality high-skilled human resources and build country capacity in related sectors; (ii) raising awareness on climate change among all HE students through the implementation of training modules on climate-related SDGs; and (iv) more effective targeting of scholarships to the most vulnerable students, who are also less resilient against climate-related shocks (see Annex 7, Table 7.1 for Summary of DLI/DLRs contributing to climate change adaption and mitigation with financing amounts).

⁵⁶ MESRSI.

⁵⁷ World Bank. 2022. *Toward More and Better Jobs for Women in Energy*.

⁵⁸ Halim, O'Sullivan, Sahay, 2023, Increasing Female Labor Force Participation. World Bank Gender Thematic Policy Notes Series: Evidence and Practice.



Citizen Engagement

69. **A major element of the PforR is quality HE service delivery through its focus on the relevance of degree programs and student employability (DLIs 2 and 3) and evaluation and tracking of KPIs to assess beneficiary impact and inform the adjustment of interventions as implementation moves forward (e.g., DLI 1).** Student beneficiary surveys have been conducted on various aspects of HE service delivery by the National Institution for Evaluation of the Superior Council of Education, Training, Higher Education and Scientific Research (*Instance Nationale d'Évaluation du Conseil Supérieur de l'Éducation, de la Formation, de l'Enseignement Supérieure et de la Recherche Scientifique, INE-CSEFRS*). Hence, technical capacity, survey tools, and feedback processes for citizen engagement are available on which the Program can build. The Operation, through DLI 1, DLI 4, DLI 6, and DLI 7, seeks to strengthen and operationalize citizen engagement. In terms of ensuring citizens at the local/university and faculty levels are consulted and informed and trust that their feedback was considered, the Operation builds on the existing participatory approach and a feedback mechanism at the central and university levels. The Operation fosters improved accountability, transparency, and trust in the HE and research system by (i) supporting the development of digital platforms to provide citizens with access to information on career paths and employability prospects, (ii) consolidating university accountability which will improve responsiveness to citizens' needs, and (iii) conducting beneficiaries feedback in the evaluations of the supported DLIs, such as DLR 6.2 in which scholarship recipients feedback is included. PACTE-ESRI also includes measures for citizen engagement and participation. Its preparation included extensive stakeholder consultations and an online feedback mechanism.

70. **The Operation will contribute toward strengthening the existing Grievance Redress Mechanism (GRM) mechanisms** (Annex 5). The Government's national complaints platform, *Chikaya*, enables citizens to file complaints related to government services across entities. In addition, MESRSI has an online complaints platform⁵⁹ for citizens to submit and track complaints with regard to HE and research central and university services. The RF includes the beneficiary satisfaction indicator, *Percentage of cases registered in the GRM resolved in a timely manner (15 business days)*. The GRM will consolidate the different sources of complaints and report on them. Additionally, the PAP includes the revision of the grievance management protocol of *Chikaya* to consider potentially impacted people and include different channels for (i) students (with specific confidential/anonymous channel for grievances related to sexual violence or abuse of any kind), (ii) program workers, and (iii) people affected by potential construction impacts.

71. **Grievance Redress.** Communities and individuals who believe that they are adversely affected as a result of a Bank supported PforR operation, as defined by the applicable policy and procedures, may submit complaints to the existing program grievance mechanism or the Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address pertinent concerns. Project affected communities and individuals may submit their complaint to the Bank's independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted at any time after concerns have been brought directly to the Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the Bank's Grievance Redress Service (GRS), visit <https://www.worldbank.org/GRS>. For information on how to submit complaints to the Bank's Accountability Mechanism, visit <https://accountability.worldbank.org>.

⁵⁹ <http://reclamation.enssup.gov.ma/index.php?page=citoyen.AccueilCitoyen>.



V. RISK

72. **The overall Operation risk is Substantial** (see Systematic Operations Risk-rating Tool). Although government commitment to the education sector is strong, including HE, as evidenced by its prioritization in the NDM and the HE budget increase this year, the following substantial risks exist: (i) macroeconomic, (ii) sector strategies and policies, (iii) fiduciary, and (iv) institutional capacity for implementation.

73. **Macroeconomic risk and related sustainability of HE financing (Substantial).** Global market conditions and frequent droughts due to climate change may continue to put pressure on commodity prices and adversely affect the Moroccan economy. A further downturn in the global economic outlook could reduce exports, tourism receipts, and foreign direct investment. In addition, the resulting accumulation of debt globally could trigger an episode of international financial instability, affecting Morocco's ability to access external finance and/or increasing the cost of covering its financial needs. The NDM and the reform agenda would improve the attractiveness of Morocco for private investment, especially in promising sectors with high value-added and mitigate the impact of these potential risks. Moreover, the Operation supports the overall efficiency and effectiveness of Morocco's HE and research system and hence the use of these expenditures. Given limited fiscal space, rising student enrolment due to demographic pressures and the overall financial sustainability of HE is a considerable concern. The Al Haouz earthquake has certain features limiting its short-term macroeconomic impact: the most affected areas only contribute to a small percentage of national GDP, tend to rely on low value-added small-scale agricultural activities, and are weakly integrated into the national economy. The most relevant risks at the macro level are the indirect spillovers that the earthquake may trigger in other regions if it adversely affects tourism, a major contributor to recent GDP growth. The ambitious US\$11.7 billion reconstruction and development plan announced could boost growth in the High Atlas provinces during its implementation (2024–2028). Depending on how it is financed, it could add pressure on already stretched public finances. **Risk mitigation measures.** The Operation will support capacity building for and track external resource mobilization of universities (via the UDCs) and the TRI-N to mitigate, partially, the fiscal risk mentioned above. Subsequently, this would create a range of alternative funding sources for HEIs, including self-funding mechanisms, beyond the government budget. The digitization of administrative and management services and systems planned as part of the PACTE-ESRI will contribute toward greater efficiency and potential cost savings once the one-time up-front investment is made.

74. **Sector Strategies and Policies risk (Substantial).** While innovative, the PACTE-ESRI is ambitious and introduces several complex reforms simultaneously, in a context of limited implementation and sector financial capacity and leadership changes at several universities, which could impact implementation and results achievement. **Risk mitigation measures.** The IPF-TA component will help mitigate some of the sector risk through systematic capacity building, especially at the university level, and through incentivizing universities external financial resource mobilization.

75. **Fiduciary risk (Substantial).** Universities are at different capacity levels and most of them have limited fiduciary capacity and autonomy, hindering effective decision-making and timely transactions. MESRSI, ONOUCS, and universities do not have experience with the Bank fiduciary requirements and, in some cases, have limited capacity in the operation of basic FM and procurement systems (see Annex 3 for detailed fiduciary risks). **Risk mitigation measures.** Through the PAP and the IPF-TA, the Operation will help institutionalize more effective fiduciary management, specifically with regard to FM, to be supported through DLI 8 (see Annex Fiduciary Assessment, IPF, PAP, and Implementation Support Plan).

76. **Overall institutional/technical capacity for implementation (Substantial).** The PACTE-ESRI is ambitious and includes many innovative initiatives launching implementation at the same time in a context in which MESRSI, ONOUCS, and university capacity for implementation is stretched and their experience with Bank Operations non yet existent. This poses a potential risk to implementation of Program activities and results achievement, although universities, MESRSI,



and ONOUC have demonstrated considerable institutional capacity in managing the large influx of students over the past few years. ***Risk mitigation measures.*** The Operation will help institutionalize a results-based approach and strengthen M&E systems and data use to enhance budgeting, planning, and implementation. The proposed TA and implementation support by the Bank task team will contribute to promoting capacity (see PAP and Implementation Support Plan annexes).



ANNEX 1. RESULTS FRAMEWORK MATRIX

Program Development Objective(s)

To improve labor market relevance of priority programs at public universities and strengthen the governance of higher education and scientific research.

PDO Indicators by Outcomes

Baseline	Closing Period
Labor Market Relevance	
Mechanism for tracking graduate employability operational (DLR 1.3) (Yes/No)	
Nov/2023	Apr/2029
No	Yes
Number of students graduated in priority degree programs (DLR 3.3 disaggregated by gender) (Number)	
Nov/2023	Apr/2029
2,400	55,000
Higher Education Governance	
Number of public universities that have achieved a predefined set of performance indicators of their annual development indicator targets set forth in the signed development contract (DLR 7.4) (Number)	
Nov/2023	Apr/2029
0	12
Research Governance	
Number of international research projects being carried out by one or more research group(s) that are members of Thematic Research Institutes-Networks (DLR 5.3) (Number)	
Nov/2023	Apr/2029
0	12

Intermediate Indicators by Results Areas

Baseline	Closing Period
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Labor Market Relevance	
Orientation, re-orientation and graduate employment tracking strategy adopted (DLR 1.1) (Yes/No)	
Nov/2023	Apr/2029
No	Yes
Online platform for (re-) orientation and university pre-enrolment is operational for: (i) regulated access programs; and (ii) open access programs (DLR 1.2) (Yes/No)	
Nov/2023	Apr/2029
No	Yes
Number of students enrolled in: (i) language; or (ii) power skills modules (including entrepreneurship, or digital, or soft skills) (DLR 2.1 disaggregated by gender, type of skills module) (Number)	
Nov/2023	Apr/2029
100,000	650,000
Number of students that obtained a certification in language or digital skills (DLR 2.2, disaggregated by gender, type of certification) (Number)	
Nov/2023	Apr/2029
0	200,000
Number of additional degree programs co-constructed with industry (DLR 3.1 disaggregated by degree level and discipline) (Number)	
Nov/2023	Apr/2029
0	200
Research Governance	
Scientific and Academic Standards (include joint national-international co-supervision of PhD programs) for the new generation PhD program adopted and published (DLR 4.1) (Yes/No)	
Nov/2023	Apr/2029
No	Yes
Number of doctorants-moniteurs (PhD student-teaching assistants) students of new generation PhD program enrolled in priority disciplines (DLR 4.2) (Number)	
Nov/2023	Apr/2029
0	4,000
Number of doctorants-moniteurs students of new generation PhD program enrolled in international mobility programs (DLR 4.3) (Number)	
Nov/2023	Apr/2029
0	500
Evaluation of the new generation PhD program completed (DLR 4.4) (Yes/No)	
Nov/2023	Apr/2029
No	Yes
Number of research groups qualified for membership of the Thematic Research Institutes-Networks (DLR 5.1) (Number)	
Nov/2023	Apr/2029
0	30
Percentage of external financing generated by one Thematic Research Institutes-Network (DLR 5.2, cumulative) (Percentage)	



Nov/2023	Apr/2029
0	3%
Evaluation report of Thematic Research Institutes-Networks completed (DLR 5.4) (Yes/No)	
Nov/2023	Apr/2029
No	Yes
Higher Education Governance	
Undergraduate scholarship beneficiaries selected through new targeting mechanism based on the Unified Social Register (DLR 6.1) (Yes/No)	
Nov/2023	Apr/2029
No	Yes
Evaluation of targeting mechanism for undergraduate student scholarship program completed (DLR 6.2) (Yes/No)	
Nov/2023	Apr/2029
No	Yes
Number of public universities with development plans aligned with PACTE-ESRI, adopted by their university council (DLR 7.1) (Number)	
Nov/2023	Apr/2029
0	12
Number of development contracts signed between public universities and MESRSI (DLR 7.2) (Number)	
Nov/2023	Apr/2029
0	12
Mid-term evaluation of university development contracts is completed (DLR 7.3) (Yes/No)	
Nov/2023	Apr/2029
No	Yes
Number of public universities with standard procedures manual for administrative, financial, accounting and procurement management adopted (DLR 8.1) (Number)	
Nov/2023	Apr/2029
0	6
Number of public universities with internal audit unit and audit committee operational (DLR 8.2) (Number)	
Nov/2023	Apr/2029
0	6
Number of public universities with 2 percent of their recurrent expenditures coming from self-generated resources annually (DLR 8.3) (Number)	
Nov/2023	Apr/2029
0	6
Number of public universities that have fulfilled at least four criteria for ex post financial control (DLR 8.4) (Number)	
Nov/2023	Apr/2029
0	3
Corporate Commitments on Climate, Gender and Citizen Engagement	
Number of students enrolled in green and resilient economy programs (DLR 3.2, Climate Indicator) (Number)	



Nov/2023	Apr/2029
0	0
Number of female students who participate in LeaderSHE training/events (Gender Indicator) (Number)	
Nov/2023	Apr/2029
0	200
Number of additional female students enrolled in STEM (Gender Indicator) (Number)	
Nov/2023	Apr/2029
0	7,500
Percentage of cases registered in the GRM that are resolved in a timely manner (15 business days) (Citizen Engagement Indicator) (Percentage)	
Nov/2023	Apr/2029
N/A	65%

Disbursement Linked Indicators (DLI)

Period	Period Definition	Timeline
Period 1	Year 1	2024
Period 2	Year 2	2025
Period 3	Year 3	2026
Period 4	Year 4	2027
Period 5	Year 5	2028

Baseline	Period 1	Period 2	Period 3	Period 4	Period 5
1 : DLI 1 Enhancing student orientation and graduate employment tracking (Yes/No)					
No	DLR 1.1: Orientation, re-orientation and graduate employment tracking strategy adopted. Baseline: No. Target: Yes.	DLR 1.2: Online platform for (re-) orientation and university pre-enrolment is operational for: (i) regulated access programs; (ii) open access programs. Baseline: (i) No; (ii) No. Target: (i) Yes; (ii)	N/A	N/A	DLR 1.4: Mechanism for tracking graduate employability is operational. Baseline: No. Target: Yes.



		No. Allocated amount: (i) 13,240,000, (ii) 13,240,000.			
0.00	4,410,000.00	26,480,000.00	0.00	0.00	13,240,000.00
DLI allocation		44,140,000.00	As a % of Total Financing Amount		15.0%
2 : DLI 2 Promoting student employability skills (Number)					
See DLRs	N/A	N/A	N/A	DLR 2.1: 650,000 students enrolled in: (i) language; or (ii) power skills modules (including entrepreneurship, or digital, or soft skills). Baseline: 100,000. Target: 650,000 (scalable)	DLR 2.2: 200,000 students obtained a certification in language or digital skills. Baseline: 0. Target: 200,000 (scalable)
0.00	0.00	0.00	0.00	19,860,000.00	24,280,000.00
DLI allocation		44,140,000.00	As a % of Total Financing Amount		15.0%
3 : DLI 3 Adapting academic programs to the needs of socio-economic sectors (Number)					
See DLRs	N/A	N/A	DLR 3.1: 200 additional degree programs co-constructed with industry. Baseline: 0. Target: 200 (scalable)	DLR 3.2: 120,000 students enrolled in priority degree programs. Baseline: 26,000. Target: 120,000 (scalable)	DLR 3.3: 55 000 students graduated in priority degree programs. Baseline: 0. Target: 55,000 (scalable)
0.00	0.00	0.00	7,350,000.00	10,300,000.00	11,770,000.00
DLI allocation		29,430,000.00	As a % of Total Financing Amount		10.0%
4 : DLI 4 Implementing the new generation PhD program (Text)					
0	N/A	DLR 4.1: Scientific and academic standards for the new generation PhD program adopted and published. Baseline: No. Target: Yes	DLR 4.2: 4,000 doctorants-moniteurs students of new generation PhD program enrolled in priority disciplines. Baseline: 0. Target: 4,000 (scalable)	DLR 4.3: 500 doctorants-moniteurs students of new generation PhD program enrolled program in international mobility programs. Baseline: 0. Target: 500 (scalable)	DLR 4.4: Evaluation of the new generation PhD program completed. Baseline: No. Target: Yes.
0.00	0.00	4,410,000.00	17,650,000.00	4,410,000.00	2,940,000.00
DLI allocation		29,430,000.00	As a % of Total Financing Amount		10.0%
5 : DLI 5 Promoting Thematic Research Institutes-Networks (Text)					



See DLRs	N/A	DLR 5.1: 30 research groups qualified for membership in the Thematic Research Institutes-Networks. Baseline: 0. Target: 30	DLR 5.2: 3 percent of financing generated by one Thematic Research Institutes-Network is external. Baseline: 0. Target: 3 percent	DLR 5.3: 12 international research projects in which one or more research group(s) that are members of Thematic Research Institutes-Networks are participating. Baseline: 0. Target: 12	DLR 5.4: Evaluation report of Thematic Research Institutes-Networks completed. Baseline: No. Target: Yes
0.00	0.00	11,770,000.00	4,410,000.00	8,830,000.00	4,410,000.00
DLI allocation		29,430,000.00	As a % of Total Financing Amount		10.0%
6 : DLI 6 Improved targeting of student scholarship program (Yes/No)					
No.	N/A	N/A	DLR 6.1: Undergraduate student scholarship beneficiaries selected through a new targeting mechanism based on the Unified Social Register. Baseline: No. Target: Yes	DLR 6.2: Evaluation of targeting mechanism for undergraduate student scholarship program completed. Baseline: No. Target: Yes	N/A
0.00	0.00	0.00	20,600,000.00	8,830,000.00	0.00
DLI allocation		29,430,000.00	As a % of Total Financing Amount		10.0%
7 : DLI 7 Institutionalization of public universities development contracts (Number)					
0	N/A	DLR 7.1: 12 public universities with development plans aligned with PACTE-ESRI objectives, adopted by their university council. Baseline: 0. Target: 12 (scalable)	DLR 7.2: 12 development contracts signed between public universities and MESRSI. Baseline: 0. Target: 12 (scalable)	DLR 7.3: Mid-term evaluation of university development contracts completed. Baseline: No. Target: Yes	DLR 7.4: 12 public universities have achieved a predefined set of performance indicators of their annual development indicator targets set forth in the signed development contract. Baseline: 0. Target: 12
0.00	0.00	4,410,000.00	8,830,000.00	6,620,000.00	24,280,000.00
DLI allocation		44,140,000.00	As a % of Total Financing Amount		15.0%
8 : DLI 8 Strengthening public universities' financial autonomy and accountability (Number)					
0	DLR 8.1: 6 public universities with standard procedures manual for	DLR 8.2: 6 public universities with internal audit unit and audit	N/A	DLR 8.3: 6 public universities with 2 percent of their recurrent	DLR 8.4: 3 public universities have fulfilled at least four criteria for ex post financial



	administrative, financial, accounting and procurement management adopted. Baseline: 0. Target: 6 (scalable)	committee operational. Baseline: 0. Target: 6 (scalable)		expenditures coming from self-generated resources annually. Baseline: 0. Target: 6	control. Baseline: 0. Target: 3 (scalable).
0.00	6,620,000.00	8,830,000.00	0.00	13,240,000.00	15,450,000.00
DLI allocation		44,140,000.00	As a % of Total Financing Amount		15.0%



Monitoring & Evaluation Plan: PDO Indicators by PDO Outcomes

Outcome: Labor Market Relevance	
Indicator: Mechanism for tracking graduate employability is operational (DLR 1.3)	
Description	Mechanism for tracking graduate employment is operational.
Frequency	Annual
Data source	MESRSI
Methodology for Data Collection	A technical document describing the mechanism and a note summarizing the analysis/results of the first round of data collected/generated
Responsibility for Data Collection	MESRSI
Indicator: Number of students graduated in priority degree programs (DLR 3.3, disaggregated by gender)	
Description	Students graduated in priority degree programs in public universities (health, education, green and resilient economy and digital)
Frequency	Annual
Data source	MESRSI
Methodology for Data Collection	MESRSI consolidated report on the number of graduates
Responsibility for Data Collection	MESRSI
Outcome Research Governance	
Indicator: Number of international research projects in which one or more research group(s) that are members of Thematic Research Institutes-Network(s) are participating (DLR 5.3)	
Description	International research projects in which one or more research group(s) that are members of TRI-N are participating
Frequency	Annual
Data source	Universities
Methodology for Data Collection	MESRSI detailed list of international research projects in which research groups which are member of the TRI-Ns are participating
Responsibility for Data Collection	MESRSI
Outcome Higher Education Governance	
Indicator: Number of public universities that have achieved a predefined set of performance indicators of their annual development indicator targets set forth in the signed development contract (DLR 7.4)	
Description	Public universities achieved a predefined set of performance indicators of their annual development contracts annually
Frequency	Annual
Data source	MESRSI
Methodology for Data Collection	MESRSI consolidated note on university performance indicators
Responsibility for Data Collection	MESRSI

Monitoring & Evaluation Plan: Intermediate Results Indicators by Results Areas

RA: Labor Market Relevance	
Indicator: Orientation, re-orientation and graduate employment tracking strategy adopted (DLR 1.1)	
Description	Development and adoption of a strategy for the orientation and reorientation of students and graduate employability tracking. The strategy includes: (i) orientation for secondary school students/graduates (<i>bacheliers</i>) about career paths/university degree program choices; (ii) academic reorientation for current HE students; and (iii) the methodology and process for



	systematically and regularly tracking the employability of HE graduates to inform the orientation/reorientation system and regulate academic program offerings.
Frequency	Once
Data source	MESRSI
Methodology for Data Collection	Strategy and ministerial decree/arrêté adopting the strategy
Responsibility for Data Collection	MESRSI
Indicator: Online platform for (re-) orientation and university pre-enrolment is operational for (i) regulated access programs; (ii) open access programs (DLR 1.2)	
Description	Operationalization of the online platform for orientation, reorientation and university pre-enrollment for open and regulated access programs. The platform is operational when: (i) domain name is active, (ii) user statistics are available; and (iii) includes orientation about university degree program choices, guidance for the application process, information on labor market outcomes by program.
Frequency	Annual
Data source	MESRSI
Methodology for Data Collection	MESRSI platform
Responsibility for Data Collection	MESRSI
Indicator: Number of students enrolled in: (i) language or (ii) power skills modules (including entrepreneurship, or digital, or soft skills) (DLR 2.1, disaggregated by gender, type of skills module)	
Description	Number of students enrolled in language and/or power skills modules (including entrepreneurship or digital or soft skills modules)
Frequency	Annual
Data source	MESRSI
Methodology for Data Collection	MESRSI consolidated report on student enrollment
Responsibility for Data Collection	MESRSI
Indicator: Number of students that obtained a certification in language or digital skills (DLR 2.2, disaggregated by gender, type of certification)	
Description	Students having obtained a certification in language or digital skills
Frequency	Annual
Data source	MESRSI, universities
Methodology for Data Collection	MESRSI consolidated note on student having obtained a certification
Responsibility for Data Collection	MESRSI
Indicator: Number of additional degree programs co-constructed with industry (DLR 3.1 disaggregated by degree level and discipline)	
Description	Number of new degree programs at public universities in open and regulated access created in collaboration with industry. Collaboration may cover: collaboration in program design, contribution to or participation in teaching activities (teaching, supervision of internships, seminars, cooperative academic-professional experience programs). Collaboration with industry is formalized in a partnership agreement or in the course description, specifying the nature of the collaboration.
Frequency	Annual
Data source	MESRSI
Methodology for Data Collection	MESRSI consolidated note including the list of co-constructed degree programs disaggregated by university, cycle, type of access and industry sector
Responsibility for Data Collection	MESRSI



RA: Research Governance	
Indicator: Scientific and academic standards for the new generation PhD program adopted and published (DLR 4.1)	
Description	Adoption of standards for the new generation PhD program by the National Commission for the Coordination of Higher Education (<i>Commission Nationale de Coordination de l'Enseignement Supérieur</i> , CNACES) and its publication in the Bulletin Officiel
Frequency	Once
Data source	MESRSI
Methodology for Data Collection	Publication in the Bulletin Officiel
Responsibility for Data Collection	MESRSI
Indicator: Number of doctorants-moniteurs students of new generation PhD program enrolled in priority disciplines (DLR 4.2)	
Description	Number of doctorants-moniteurs students of new generation PhD students enrolled in priority disciplines as defined by MESRSI
Frequency	Annual
Data source	MESRSI
Methodology for Data Collection	Summary note of the doctorants-moniteurs students of new generation PhD students enrolled
Responsibility for Data Collection	MESRSI
Indicator: Number of doctorants-moniteurs students of new generation PhD program enrolled in international mobility programs (DLR 4.3)	
Description	Number of doctorants-moniteurs students of new generation PhD students who completed international mobility programs
Frequency	Annual
Data source	MESRSI
Methodology for Data Collection	Summary note of the doctorants-moniteurs students of new generation PhD students who completed an international mobility program
Responsibility for Data Collection	MESRSI
Indicator: Evaluation of the new generation PhD program completed (DLR 4.4)	
Description	The evaluation will address qualitative and quantitative aspects of implementation and will be based on a survey of a representative sample of thesis directors and new generation PhD students. The evaluation will be completed when the final report is delivered.
Frequency	Once
Data source	MESRSI
Methodology for Data Collection	Evaluation report
Responsibility for Data Collection	MESRSI
Indicator: Number of research groups qualified for membership of the Thematic Research Institutes-Networks (DLR 5.1)	
Description	Number of research groups meeting defined performance criteria to qualify for membership in the TRI-N
Frequency	Annual
Data source	MESRSI
Methodology for Data Collection	Review of membership criteria and report
Responsibility for Data Collection	MESRSI
Indicator: Percentage of external financing generated by one Thematic Research Institutes-Network (DLR 5.2)	
Description	Cumulative percentage of financing obtained by one TRI-N that is external, combined of the total amount of recurrent resources of TRI-N. External financing includes resources from the private sector, non-profit foundations and international cooperation.



Frequency	Annual
Data source	MESRSI
Methodology for Data Collection	Review of financial reports of TRI-N
Responsibility for Data Collection	MESRSI
Indicator: Evaluation report of Thematic Research Institutes-Networks completed (DLR 5.4)	
Description	Evaluation of the pilot TRI-N(s). This evaluation will be based on (i) survey of a sample of research groups on work progress/research performance (e.g., number of international publications etc.) and satisfaction with TRI-N services; as well as (ii) qualitative survey of administration/leadership teams of the TRI-Non their functioning, challenges and achievements. The evaluation will be completed when the final report is delivered.
Frequency	Once
Data source	MESRSI
Methodology for Data Collection	Evaluation report
Responsibility for Data Collection	MESRSI
RA: Higher Education Governance	
Indicator: Undergraduate scholarship beneficiaries selected through new targeting mechanism based on Unified Social Register (DLR 6.1)	
Description	Implementation of the new targeting mechanism for the selection of undergraduate scholarship beneficiaries based on Unified Social Register.
Frequency	Annual
Data source	ONOUSC
Methodology for Data Collection	Review of report of the national commission in charge of scholarships allocation
Responsibility for Data Collection	ONOUSC
Indicator: Evaluation of targeting mechanism for undergraduate student scholarship program completed (DLR 6.2)	
Description	Evaluation of the implementation process of the new targeting mechanism of student scholarships programs is completed. The evaluation will be documented in a report. The evaluation includes an analysis of the efficiency and effectiveness of the new targeting mechanism of student social assistance on beneficiary outcomes (measured e.g., by student retention, timely completion of exams/degrees), student wellbeing, satisfaction and other criteria.
Frequency	Once
Data source	ONOUSC
Methodology for Data Collection	Review of evaluation report.
Responsibility for Data Collection	ONOUSC
Indicator: Number of public universities with development plans aligned with PACTE-ESRI objectives, adopted by their university council (DLR 7.1)	
Description	Number of universities with development plans aligned with the strategic orientations and objectives of PACTE-ESRI, adopted by their university council and formalized in the minutes of the university council meeting.
Frequency	Annual
Data source	Universities
Methodology for Data Collection	University development plans and the supporting document of adoption of the university council (minutes)
Responsibility for Data Collection	MESRSI, universities
Indicator: Number of development contracts signed between public universities and MESRSI (DLR 7.2)	



Description	Number of development contracts signed between public universities and MESRSI. The development contracts include: (i) university-specific objectives; (ii) university-specific performance indicators with baseline and targets with a timetable for reaching targets.
Frequency	Annual
Data source	MESRSI
Methodology for Data Collection	Review of signed university development contracts
Responsibility for Data Collection	MESRSI
Indicator: Midterm evaluation of university development contracts is completed (DLR 7.3)	
Description	Midterm evaluation of university development contracts is completed
Frequency	Once
Data source	MESRSI
Methodology for Data Collection	Review of midterm evaluation report
Responsibility for Data Collection	MESRSI
Indicator: Number of public universities with standard procedures manual for administrative, financial, accounting and procurement management adopted (DLR 8.1)	
Description	Number of public universities that have a standard procedures manual for administrative, financial, accounting and procurement management adopted by their university council and formalized in the council's meeting minutes.
Frequency	Annual
Data source	Universities
Methodology for Data Collection	Review of MESRSI university standard procedures manuals and the university council meeting minutes.
Responsibility for Data Collection	Universities, MESRSI
Indicator: Number of public universities with internal audit unit and audit committee operational (DLR 8.2)	
Description	Number of public universities with internal audit unit and audit committee operational
Frequency	Annual
Data source	Universities, MESRSI
Methodology for Data Collection	Review of MESRSI note listing the universities having operationalized internal audit unit and audit committee, composition of the units and committees, and at least one internal audit report per university listed as a proof of operationalization.
Responsibility for Data Collection	Universities, MESRSI
Number of public universities with 2 percent of their recurrent expenditures coming from self-generated resources annually (DLR 8.3)	
Description	Percentage amount of their own resources generated annually by each university of total amount of recurrent university resources.
Frequency	Annual
Data source	Universities, MESRSI
Methodology for Data Collection	Review of MESRSI consolidated note detailing the amount of their own resources generated annually by universities, disaggregated by university and source of revenue and the amount of total annual recurrent resources annually by universities.
Responsibility for Data Collection	Universities, MESRSI
Number of public universities that have fulfilled at least four criteria for ex post financial control (DLR 8.4)	
Description	Number of public universities fulfilling at least four out of the six criteria for ex post financial control, including: (i) organizational chart; (ii) procedures manual; (iii) general accounting; (iv) personnel status; (v) internal auditor; (vi) integrated information system.
Frequency	Annual
Data source	Universities, MESRSI



Methodology for Data Collection	Review of MESRSI consolidated report on public university status regarding the fulfillment of the instruments required to benefit from ex post financial control, as stipulated in Article 17 in Law 69-00.
Responsibility for Data Collection	Universities, MESRSI
RA: Corporate Commitments on Climate, Gender, and Citizen Engagement	
Indicator: Number of students enrolled in green and resilient economy programs (Climate Indicator)	
Description	Number of students enrolled in green and resilient economy programs in public universities
Frequency	Annual
Data source	MESRSI
Methodology for Data Collection	Review of annual university census data. MESRSI consolidated report on the number of graduates disaggregated by cycle, university, type of access, gender, and program;
Responsibility for Data Collection	MESRSI
Indicator: Number of female students who participate in LeaderSHE training/events	
Description	Number of female students who participate in LeaderSHE initiative networking events or training, cumulative
Frequency	Annual
Data source	MESRSI
Methodology for Data Collection	LeaderSHE event reports
Responsibility for Data Collection	MESRSI
Indicator: Number of additional female students enrolled in STEM	
Description	Number of female students enrolled in STEM programs in addition to current baseline, cumulative
Frequency	Annual
Data source	MESRSI, universities
Methodology for Data Collection	Annual university census data (administrative data).
Responsibility for Data Collection	MESRSI, universities
Indicator: Percentage of cases registered in the GRM that are resolved in a timely manner (15 business days)	
Description	Percentage of total GRM cases registered through all different channels, such as Chikaya platform, letter, email, phone etc.
Frequency	Bi-annual
Data source	MESRSI
Methodology for Data Collection	Report
Responsibility for Data Collection	MESRSI



Verification Protocol Table: Disbursement Linked Indicators

DLI 1: Enhancing student orientation and graduate employment tracking	
Formula	<p>DLR 1.1: Total allocation is disbursed when achievement is verified.</p> <p>DLR 1.2: US\$13,241,258 for (i) and US\$13,241,258 for (ii) (scalable)</p> <p>DLR 1.3: Total allocation is disbursed when achievement is verified.</p>
Description	<p>DLR 1.1: Development and adoption of a strategy for the orientation and re-orientation of students and graduate employability tracking. The strategy includes: (i) orientation for secondary school students/graduates (<i>bacheliers</i>) about career paths/university degree program choices; (ii) academic reorientation for current HE students; and (iii) the methodology and process for systematically and regularly tracking the employability of HE graduates to inform the orientation/reorientation system and regulate academic program offerings.</p> <p>DLR 1.2: Operationalization of the online platform for orientation, reorientation and university pre-enrollment for open and regulated access programs. The platform is operational when: (i) domain name is active, (ii) user statistics are available; and (iii) includes orientation about university degree program choices, guidance for the application process, information on labor market outcomes by program.</p> <p>DLR 1.3: Operationalization of the mechanism for tracking graduate employability. The mechanism is operational when: (i) MESRSI produced a technical document describing the mechanism (including data source and indicators used, data generation protocol, data analysis; actions for making the mechanism regular and sustainable and modalities for publication/dissemination of the employability data), and (ii) first round of data is collected/generated and complies with the criteria defined in the OM.</p>
Data source/ Agency	<p>DLR 1.1: MESRSI</p> <p>DLR 1.2: MESRSI</p> <p>DLR 1.3: MESRSI</p>
Verification Entity	<p>DLR 1.1: IGM</p> <p>DLR 1.2: IGM</p> <p>DLR 1.3: IGM</p>
Procedure	<p>DLR 1.1: The IVA will be provided with (i) the strategy and (ii) the ministerial decree/arrêté adopting the strategy and will verify it is compliant with the description of the indicator.</p> <p>DLR 1.2: The IVA will be provided with: (i) beta user access to the platform and (ii) user access report; and will verify that the platform meets all the specified criteria.</p> <p>DLR 1.3: The IVA will be provided with (i) a technical document describing the mechanism and (ii) note summarizing the analysis/results of the first round of data collected/generated. The IVA will verify the mechanism meets all specified criteria.</p>
DLI 2: Promoting student employability skills	
Formula	<p>DLR 2.1: From a baseline of 100,000, US\$36,112.64 per one thousand students enrolled (scalable).</p> <p>DLR 2.2: From a baseline of 0, US\$121,377.88 per one thousand students having obtained a certification in language or digital skills (scalable).</p>
Description	<p>DLR 2.1: Number of students enrolled in language and/or power skills modules (including entrepreneurship or digital or soft skills modules).</p> <p>DLR 2.2: Number of students having obtained a certification in languages or digital skills.</p>
Data source/ Agency	<p>DLR 2.1: MESRSI, universities</p> <p>DLR 2.2: MESRSI, universities</p>
Verification Entity	<p>DLR 2.1: IGM</p> <p>DLR 2.2: IGM</p>
Procedure	<p>DLR 2.1: The IVA will be provided with (i) MESRSI consolidated note, based on university data on the total number of students enrolled, disaggregated by type of module, cycle, university, type of access, gender and program; and (ii) data to conduct a check, which must cover a minimum number of randomly selected students. The minimum number is established in the OM.</p>



	DLR 2.2: The IVA will be provided with (i) MESRSI consolidated note based on university data on the total number of students having obtained a certification in languages (level certificate issued by the platform, external certificate or supplement to the degree certificate) or digital skills (internal or external certification) disaggregated by program, cycle, university, type of access, gender; and (ii) access to data for a sample of students to verify the results are met.
DLI 3: Adapting degree programs to the needs of the socio-economic sectors (health, education, green and resilient economy, digital)	
Formula	DLR 3.1: From a baseline of 0, US\$36,764.39 per each degree program co-constructed with industry (scalable). DLR 3.2: From a baseline of 26,000, US\$109,594.88 per one thousand additional students enrolled (scalable). DLR 3.3: From a baseline of 0, US\$213,994.96 per one thousand students graduated (scalable).
Description	DLR 3.1: Number of new degree programs at public universities in open and regulated access created in collaboration with industry. Collaboration may cover: collaboration in program design, contribution to or participation in teaching activities (teaching, supervision of internships, seminars, cooperative academic-professional experience programs). Collaboration with industry is formalized in a partnership agreement or in the course description, specifying the nature of the collaboration. DLR 3.2: Number of additional students enrolled in priority degree programs in public universities (health, education, green and resilient economy and digital). DLR 3.3: Number of graduates of priority degree programs in public universities (health, education, green and resilient economy and digital).
Data source/ Agency	DLR 3.1: MESRSI DLR 3.2: MESRSI DLR 3.3: MESRSI
Verification Entity	DLR 3.1: IGM DLR 3.2: IGM DLR 3.3: IGM
Procedure	DLR 3.1: The IVA will be provided with consolidated note including the list of co-constructed degree programs disaggregated by university, cycle, type of access and industry sector and will conduct a sample-based verification. DLR 3.2: The IVA will be provided with (i) consolidated note on student enrollment disaggregated by cycle, university, type of access, gender and priority degree program; and (ii) access to student enrolment data to conduct interviews with randomly selected students to verify they are enrolled in the priority degree programs. The minimum number of interviews will be defined in the OM. DLR 3.3: The IVA will be provided with (i) consolidated report on the number of graduates disaggregated by cycle, university, type of access, gender and program; and (ii) will conduct interviews with randomly selected students to verify they have graduated. The minimum number of interviews will be established in the OM.
DLI 4: Implementing the new generation PhD program	
Formula	DLR 4.1: Total allocation is disbursed when achievement is verified. DLR 4.2: From a baseline of 0, US\$4,413.73 per each new generation PhD student enrolled (scalable). DLR 4.3: From a baseline of 0, US\$8,827.29 per each new generation PhD student enrolled (scalable). DLR 4.4: Total allocation is disbursed when achievement is verified.
Description	DLR 4.1: Adoption of standards for the new generation PhD program by the CNACES and its publication in the Bulletin Officiel. DLR 4.2: Number of doctorants-moniteurs students of new generation PhD students enrolled in priority disciplines as defined by MESRI. DLR 4.3: Number of doctorants-moniteurs students of new generation PhD students having accomplished an international mobility. DLR 4.4: The evaluation will address qualitative and quantitative aspects of implementation and will be based on a survey of a representative sample of thesis directors and PhD students. The evaluation will be completed when the final report is delivered.
Data source/ Agency	DLR 4.1: MESRSI DLR 4.2: MESRSI DLR 4.3: MESRSI DLR 4.4: MESRSI
Verification Entity	DLR 4.1: IGM DLR 4.2: IGM



	<p>DLR 4.3: IGM</p> <p>DLR 4.4: IGM</p>
Procedure	<p>DLR 4.1: The IVA will be provided with the CNACES meeting minutes and the number of the Bulletin Officiel in which the Standards are published.</p> <p>DLR 4.2: The IVA will (i) be provided with a summary note of the number of doctorants-moniteurs students of new generation PhD enrolled, disaggregated by university, gender and degree; and (ii) visit of one or several universities to verify the number of doctorants-moniteurs students of new generation PhD students enrolled at the time of the visit.</p> <p>DLR 4.3: The IVA will be provided with (i) summary note of the number of doctorants-moniteurs students of new generation PhD who completed international mobility programs, disaggregated by university, gender and degree; and (ii) will verify a sample of <i>attestations d'accueil</i> or enrolment certificate of doctorants-moniteurs students in international mobility.</p> <p>DLR 4.4: The IVA will be provided with the evaluation report and will verify it meets all the specified criteria in the above description of DLR 4.4.</p>
DLI 5: Promoting Thematic Research Institutes-Networks	
Formula	<p>DLR 5.1: From a baseline of 0, US\$392,324.09 per research group having qualified for membership in a Thematic Research institutes-Networks (scalable).</p> <p>DLR 5.2: Total allocation is disbursed when achievement is verified.</p> <p>DLR 5.3: From a baseline of 0, US\$735,607.68 per international project in which one or more research group member of a Thematic Research Institutes-Networks are participating (scalable).</p> <p>DLR 5.4: Total allocation is disbursed when achievement is verified.</p>
Description	<p>DLR 5.1: Number of research groups meeting defined performance criteria to qualify for membership in the Thematic Research Institutes-Networks.</p> <p>DLR 5.2: Cumulative percentage of financing obtained by one Thematic Research Institute-Network that is external, combined of the total amount of recurrent resources of TRI-N. External financing includes resources from the private sector, non-profit foundations and international cooperation.</p> <p>DLR 5.3: Number of international research projects in which one or more research groups that are members of Thematic Research Institutes-Network(s) are participating.</p> <p>DLR 5.4: This evaluation will be based on (i) survey of a sample of research groups on work progress/research performance (e.g. number of international publications etc.) and satisfaction with TRI-N services; as well as (ii) qualitative survey of administration/leadership teams of the TRI-Non their functioning, challenges and achievements. The evaluation will be completed when the final report is delivered.</p>
Data source/ Agency	<p>DLR 5.1: MESRSI</p> <p>DLR 5.2: MESRSI</p> <p>DLR 5.3: MESRSI</p>
Verification Entity	<p>DLR 5.1: IGM</p> <p>DLR 5.2: IGM</p> <p>DLR 5.3: IGM</p>
Procedure	<p>DLR 5.1: The IVA will be provided with (i) membership criteria; and (ii) a report on research group membership of TRI-N.</p> <p>DLR 5.2: The IVA will be provided with the financial reports of the TRI-N.</p> <p>DLR 5.3: The IVA will be provided with detailed list of international research projects in which research groups which are member of the TRI-Ns are participating and confirms the results are achieved.</p> <p>DLR 5.4: The IVA will be provided with the evaluation report and will verify it meets all the specified criteria.</p>
DLI 6: Improved targeting of student scholarship program	
Formula	<p>DLR 6.1: Total allocation is disbursed when achievement is verified.</p> <p>DLR 6.2: Total allocation is disbursed when achievement is verified.</p>
Description	<p>DLR 6.1: Implementation of the new targeting mechanism for the selection of undergraduate scholarship beneficiaries based on Unified Social Register.</p> <p>DLR 6.2: Evaluation of the implementation process of the new targeting mechanism of student scholarships programs is completed. The evaluation will be documented in a report. The evaluation includes an analysis of the efficiency and effectiveness of the new targeting mechanism of student social assistance on beneficiary outcomes (measured e.g. by student retention, timely completion of exams/degrees), student wellbeing, satisfaction and other criteria defined in the OM.</p>



Data source/ Agency	DLR 6.1: ONOUSC DLR 6.2: ONOUSC
Verification Entity	DLR 6.1: IGM DLR 6.2: IGM
Procedure	DLR 6.1: The IVA will be provided with report of the ministerial commission in charge of scholarships allocation which describes the new targeting mechanism. The results will be disaggregated by university faculty degree/program, gender. The independent verification agency (IVA) will confirm the undergraduate scholarships were allocated based on the new targeting mechanism based on the unified social registry. DLR 6.2: The IVA will be provided with the evaluation report and will verify that it meets the specified criteria.
DLI 7: Institutionalization of public university development contracts	
Formula	DLR 7.1: From a baseline of 0, US\$367,812.72 per public university (scalable). DLR 7.2: From a baseline of 0, US\$735,607.68 per development contract signed (scalable). DLR 7.3: Total allocation is disbursed when achievement is verified. DLR 7.4: From a baseline of 0, US\$2,023,049.93 per university having achieved a predefined set of performance indicators (scalable).
Description	DLR 7.1: Number of universities with development plans aligned with the strategic orientations and objectives of PACTE-ESRI, adopted by their university council and formalized in the minutes of the university council meeting. DLR 7.2: Number of development contracts signed between public universities and MESRSI. The development contracts include: (i) university-specific objectives; (ii) university-specific performance indicators with baseline and targets with a timetable for reaching targets. DLR 7.3: Mid-term evaluation of the implementation of the university development contracts. DLR 7.4: Number of public universities achieving a predefined set of performance indicators of their development contracts (annually). The predefined set of performance indicators will be defined in the OM.
Data source/ Agency	DLR 7.1: MESRSI, universities DLR 7.2: MESRSI DLR 7.3: MESRSI DLR 7.4: MESRSI, universities
Verification Entity	DLR 7.1: IGM DLR 7.2: IGM DLR 7.3: IGM DLR 7.4: IGM
Procedure	DLR 7.1: The IVA will be provided with the university development plans and the supporting document of adoption of the university council (minutes). DLR 7.2: The IVA will be provided with the signed university development contracts. DLR 7.3: The IVA will be provided with the mid-term evaluation report. DLR 7.4: The IVA will be provided with a consolidated note on university performance indicators and will verify results achievement.
DLI 8: Strengthening universities financial autonomy and accountability	
Formula	DLR 8.1: From a baseline of 0, US\$1,103,411.51 per public university (scalable). DLR 8.2: From a baseline of 0, US\$1,471,215.35 per public university (scalable). DLR 8.3: From a baseline of 0, US\$2,206,876.33 per public university with 2 percent of its recurrent expenditures coming from self-generated resources annually (scalable). DLR 8.4: From a baseline of 0, US\$5,149,857.85 per university (scalable).
Description	DLR 8.1: Number of public universities that have a standard procedures manual for administrative, financial, accounting and procurement management adopted by their university council and formalized in the council's meeting minutes. DLR 8.2: Number of universities with internal audit unit and audit committee operational DLR 8.3: Percentage amount of their own resources generated annually by each university of total amount of recurrent university resources. DLR 8.4: Number of public universities fulfilling at least four out of the six criteria for ex post financial control, including: (i) organizational chart; (ii) procedures manual; (iii) general accounting; (iv) personnel status; (v) internal auditor; (vi) integrated information system.
Data source/ Agency	DLR 8.1: Universities, MESRSI



	DLR 8.2: Universities, MESRSI DLR 8.3: Universities, MESRSI DLR 8.4: Universities, MESRSI
Verification Entity	DLR 8.1: IGM DLR 8.2: IGM DLR 8.3: IGM DLR 8.4: IGM
Procedure	DLR 8.1: The IVA will receive university standard procedures manuals and the university council meeting minutes formalizing the adoption of the manual. DLR 8.2: The IVA will be provided by MESRSI with a note listing the universities having operationalized internal audit unit and audit committee, composition of the units and committees and at least one internal audit report per university listed as proof of operationalization. DLR 8.3: The IVA will be provided by MESRSI with a consolidated note detailing the amount of their own resources generated annually by universities, disaggregated by university and source of revenue and the amount of total annual recurrent resources annually by universities. DLR 8.4: The IVA will be provided by MESRSI with a consolidated report on the effective implementation by universities of the instruments required to benefit from ex post financial control, as stipulated in Article 17 in Law 69-00. The IVA will verify the number of universities which have fulfilled at least four of the specified criteria.



ANNEX 2. SUMMARY TECHNICAL ASSESSMENT

Strategic Relevance

1. **The proposed Program is strategically relevant and investments in HE are strategic for Morocco's NDM.** HE is instrumental in fostering growth, reducing poverty and boosting shared prosperity. A highly skilled workforce with lifelong access to a quality HE is a prerequisite for innovation and growth, as well-educated people are more employable and productive, earn higher wages and cope with economic shocks better. HE can act as a catalyst through promoting skilled human capital and research capacity for the green, resilient and digital economy, through technology absorption and innovation spillover effects, and through positive social outcomes such as greater female LFP,⁶⁰ improved health and welfare, higher civic participation, good governance and human and environmental protection.⁶¹ Given Morocco's trading, educational and middle-income status, HE plays a critical role in improving youth employment, raising salaries and boosting scientific and technological capabilities in the private sector. Human capital accumulation cannot only accelerate economic growth, but also create incentives for research and innovation,⁶² increase labor productivity, entrepreneurship and job creation.⁶³

Technical Soundness

2. **The technical design of the Program draws on strong evidence and global best practices.** By promoting access, retention and quality of HE and scientific research the proposed Program echoes the key findings and recommendations from the 2021 "Steering Tertiary Education: Toward Resilient Systems that Deliver for All" and the 2018 "Expectations and Aspirations: A New Framework for Education in Middle East and North Africa" Reports. It is also aligned with the Bank's Education Strategy 2020 "Learning for All – Investing in People's Knowledge and Skills to Promote Development".

3. **The Program is designed to contribute to the attainment of key results identified in the PACTE-ESRI 2030 and to improving the quality and the relevance of HE, scientific research and innovation.** It focuses on a holistic set of interventions targeting academic aspects (RA 1), scientific research (RA 2) and governance (RA 3). Results areas are defined to encompass both sectoral interventions as well as governance that is a cross-cutting element of implementation that will enhance the likelihood of success. RA 1 focuses on improving the labor market relevance of public universities programs. It is centered around a set of measures linked to academic programs, orientation, capacity building and monitoring of graduate employment. The operationalization of these measures would lead to significant improvement in HE outcomes, and reduction of dropout. RA 2 focuses on aligning scientific research and the doctoral cycle with national priorities and international standards. It would lead to the improvement of the efficiency of scientific research. RA 3 focuses on improving governance at the central and university level. This area is centered around a set of measures linked to student social assistance, improve autonomy of universities and contractual approach. RA 3 will guide implementation and will ensure that activities translate into results.

⁶⁰ Female university graduates have the highest LFP rate of all education levels in Morocco. This pattern is consistent across MENA, e.g., Tunisia and Egypt.

⁶¹ OECD 2012; McMahon and Oketch 2013; Oketch, McCowan and Schendel 2014.

⁶² Blackburn, Huang and Pozzolo (2000)

⁶³ A country's productivity is determined by the productivity in its urban areas (Ahrend, 2014). In addition to natural advantages, urban productivity is driven by agglomeration effects, i.e. bringing the right combination of workers, businesses and households together in the most efficient way (Lin, 2011).



Results Area 1: Improving the labor market relevance of public university programs

4. **The employability of HE graduates is a major challenge.** The high rate of unemployment among HE graduates can be attributed to both demand and supply-side factors, with the latter being tackled by this Program. The integration of graduates into the job market is partly linked to the quality of training provided to students by the university, the acquired skills of graduates and the match between these skills to the demand of employers in the job market. Three areas of intervention supported by the Program have the potential to improving the supply of graduates for the job market: (i) improving data collection to provide students with career guidance and orientation/reorientation and the monitoring of the integration of graduates in the labor market; (ii) strengthening students' language, soft and digital skills to respond to labor market needs; and (iii) adapting HE programs to the needs of key productive sectors.

Table 2.1. Rationale for Selection of Priority Sectors and Labor Market Prospects

Priority Sector	Rationale for Selection
Health	There is a health personnel shortage in Morocco with 7.3 doctors per 10,000 inhabitants, below the international standard of 23 doctors. ⁶⁴ The NDM aims to train 3,600 doctors and 7,000 nurses per year to close this gap. Internationally, with increasingly older populations, the estimated shortage in OECD countries is 400,000 doctors and 2.5 million nurses by 2030. ⁶⁵ The increasing demand and policies for international mobility offer labor market opportunities to Moroccan professionals in these fields.
Education	With an average student-teacher ratio of 27:1 in basic education overcrowding remains a challenge. Public education is facing retirement of an entire teacher generation and the need for new qualified teachers over the next years (the estimated shortage is 100,000 teachers from 2022 to 2029). ⁶⁶ Over 6,000 new teachers were hired in 2022–2023. Teacher shortages in OECD countries are increasing teacher mobility, offering job prospects to Moroccan education graduates. Globally, education jobs are expected to grow by 10 percent over the next five years, leading to three million additional teaching jobs. ⁶⁷
Green and resilient economy	The net job creation potential of clean energy in Morocco is estimated at 760,000 net jobs per year over 30 years. The NDM aims to develop the workforce and research to support green industries, notably solar and wind energy, liquid sanitation, and waste management, that would contribute toward reducing GHG emissions. For example, liquid sanitation (which includes wastewater treatment and management), and waste management can contribute to reducing GHG emissions, e.g., through removal of Biochemical Oxygen Demand (BOD) and presence of methane capture system during treatment. Waste management could include material recovery and recycling for reuse purposes, pre-sorting and segregating at source and collecting feedstock and/or bio-waste separately. Globally, the transition to a green economy is estimated to create 24 million jobs by 2030, ⁶⁸ with renewable energies, waste management, sustainable cities, and biodiversity protection leading the job market demand. In the energy sector alone, an estimated 14 million new clean energy jobs will be created by 2030, while another 16 million workers will shift to new roles related to clean energy. ⁶⁹
Digital	The NDM digitalization agenda requires a highly digitally skilled labor force and aims for 50,000 digital skilled individuals annually. The demand for digital roles makes up 16 of the top 100 jobs in highest demand. ⁷⁰

Results Area 2: Promoting research based on international standards and national priorities

5. **Despite some achievements, Morocco's scientific research output remains modest compared to other countries, including in Middle East and North Africa.** Morocco, which had around the same number of articles published as Malaysia in 1998, published more than 5 times less in 2017. Similarly, the Czech Republic, with less than 11 million

⁶⁴ WHO, 2016, Health workforce requirements for universal health coverage and the Sustainable Development Goals.(Human Resources for Health Observer, 17). Human Resources for Health Observer Series No. 17 2016;17:40.

⁶⁵ Scheffler, R. M., and D. R. Arnold. 2019. Projecting Shortages and Surpluses of Doctors and Nurses in the OECD: What Looms Ahead. Health Economic Policy Law 14 (2): 274–290.

⁶⁶ World Bank, Morocco Education Support Program (P167619) Program Appraisal Document, Ministry of National Education data.

⁶⁷ World Economic Forum. The Future of Jobs 2023.

⁶⁸ ILO (International Labour Organization), World Employment and Social Outlook: Greening with Jobs.

⁶⁹ IEA (International Energy Agency). 2022. *World Energy Employment*. IEA, Paris.

⁷⁰ World Economic Forum. The Future of Jobs 2023.



inhabitants in 2017, produced nearly five times the volume of publications of Morocco in the same year. HE suffers from a high academic staff-student ratios that falls short of international standards and this situation is set to worsen in the next few years. There is an urgent need to train a new generation of academic and research staff, as student numbers will continue to grow over the next few years and a massive retirement of teachers is underway (around 2,200 will retire by 2026).⁷¹ Two areas of intervention supported by the Program have the potential to improve scientific research: (i) implementing the new generation PhD program and harmonizing the doctoral cycle in line with international standards to ensure that PhDs meet established standards for high quality research; and (ii) establishing TRI-N and aligning scientific research with national priorities and international standards.

Results Area 3: Improving governance at central and university level

6. **A long-standing needs-based student undergraduate scholarship program covers approximately 40 percent of HE students.** The targeting of the scholarship program is based on a self-declared family income and available data suggest there is room for improved efficiency in targeting.⁷² A large body of evidence finds that scholarship programs tend to improve education participation outcomes (enrollment, attendance, completion and dropout) and can improve student learning. A well targeted need-based scholarship program as the one proposed by the Program, paired with career guidance and orientation, has been identified in the literature as an effective intervention for improving education outcomes. Evidence from basic education suggests that interventions increasing the benefits of attending school (through scholarships) increase time in school,⁷³ while those that increase the benefits of higher effort and better academic performance. Evidence on the effect of scholarships for HE students is promising, although the results are mixed.⁷⁴ In particular, a few rigorous evaluations have shown large impacts. For instance, a US study shows that scholarships significantly boosted college enrollment and retention. Four years after award receipt, randomly selected scholarship winners were 13 percentage points more likely to be enrolled in college.⁷⁵

7. **Finally, university governance is an important driver of change and the most decisive factor in achieving its goals⁷⁶ and an area for improvement for the HE system.** Evidence shows that greater autonomy in HEIs tends to be associated with better HEIs performance⁷⁷ and that greater autonomy at a decentralized level requires capacity, resources, and accountability mechanisms to lead to better student performance.⁷⁸ However, currently, public funds constitute the main resource of the public university (between 70 and 97 percent), impacting the universities ability to develop their own resources and human capital, and consequently its autonomy. This structure hinders the development of Moroccan public universities and the success of university reform.⁷⁹

⁷¹ MESRI. (2021) PACTE-ESRI 2030 'Ensemble, pour un nouveau modèle de l'Université marocaine'.

⁷² INE-CSEFRS, *Enquête sur les étudiants et la vie universitaire*, 2019.

⁷³ Glewwe & Muralidharan (2015), Damon et al (2018).

⁷⁴ Dynarski (2008), Castelman (2014), Scott-Clayton (2011b), Scott-Clayton & Zafar (2016), Bettinger et al (2016); DesJardins & McCall (2014), DesJardin et al, (2010), Sjoquist & Winters (2012, 2015)

⁷⁵ Angrist et al (2017)

⁷⁶ Jaramillo, A., Moreno, J., Demenet, A., Zaafrane, H., & Monet, O. (2012). *Universities through the Looking Glass: Benchmarking University Governance to Enable Higher Education Modernization in MENA*. Washington, DC: World Bank.

⁷⁷ World Bank. (2018). *Expectations and Aspirations: A New Framework for Education in the Middle East and North Africa: Overview*. Washington, D.C.: World Bank Group.

⁷⁸ Jaramillo, A., Moreno, J., Demenet, A., Zaafrane, H., & Monet, O. (2012). *Universities through the Looking Glass: Benchmarking University Governance to Enable Higher Education Modernization in MENA*. Washington, DC: World Bank, and *Learning for All: Investing in People's Knowledge and Skills to Promote Development* - World Bank Group Education Strategy 2020. Washington, DC: World Bank; 2011.

⁷⁹ CSEFRS. (2019), *Réforme de l'enseignement supérieur Perspectives Stratégiques*.



Government program governance structure and institutional arrangements

8. **The government program implementation arrangements are appropriate and already functional, but implementing entities have some capacity limitations which need to be addressed.** The MESRSI is the lead implementing agency for the PACTE-ESRI at the central level, which coordinates the implementation and M&E of the various PACTE-ESRI implementing entities. Each of the key initiatives of the PACTE-ESRI is spearheaded by a focal point at the central MESRSI level, as well as at each of the universities involved. Beyond the collection of annual statistics based on the university census, a PACTE-ESRI M&E is being set up, which will also include monitoring and benchmarking of results achievement.

9. **However, institutional capacity for managing and implementing this comprehensive and ambitious PACTE-ESRI reform program at the MESRSI, other national entities involved, and the university level is constrained.** More specifically, at the national level, including due to staff shortages but also some constraints pertaining to specific technical expertise, MESRSI would benefit from capacity strengthening, notably in the area of sequencing of reform initiatives combined with M&E.

Program Expenditure Framework

10. **The Program will be financed over five years (2024–2029) for a total PEF of US\$1,250 million, including an IBRD loan of US\$300 million.** As a subset of the government program, the PforR will finance specific budget lines in sub-programs 907, 908 and 909 of the Morasse of the government program and incentivize specific results to increase efficiency in the implementation of select interventions of the PACTE-ESRI.

Table 2.2. Summary of PEF (million MAD)

Prog.	Budget lines	2023	2024	2025	2026	2027	2028	Total 2024–2029
907	Operating grant “subsidies” to universities to increase the density of healthcare personnel by 2030.	62.4	62.4	62.4	62.4	62.4	62.4	374
907	Operating grant “subsidies” to universities as part of a program to train primary and secondary school teachers by 2025.	123.2	186.0	186.0	186.0	186.0	186.0	1,116
908	Common services – scientific research subsidy	40.9	50.0	50.0	50.0	50.0	50.0	300
908	Training of the new generation of doctoral researchers – operating grant to universities	40.0	180.0	180.0	180.0	180.0	180.0	1,080
909	Common services – granting of scholarships and lump-sum allowances – operating grant “subsidies” to ONOUCS for study scholarships in Morocco.	2,023.0	2,023.0	2,023.0	2,023.0	2,023.0	2,023.0	12,138
	Total MAD (millions)	2,289.6	2,501.4	2,501.4	2,501.4	2,501.4	2,501.4	12,507.0
	Total US\$ (millions)		1,250.0					



Table 2.3. Summary of the PEF by RAs (million MAD and US\$)

Results Area	MAD	US\$	% Total Finance
RA1. Improving the labor market relevance of public universities programs (selected budget lines under program 907)	1,242	124	10
RA2. Aligning scientific research with international standards and national priorities (selected budget lines under program 909)	1,150	115	9
RA3. Improving governance at the central and university level (selected budget lines under program 909)	10,115	1,011	81
Total PforR	12,507	1,250	100.00

11. Alignment of the budget with government priorities, classification, sustainability, and predictability of expenditures:

- **Fiscal and financial sustainability.** The medium-term budgetary prospects are adequate to ensure the Program's sustainability.
- **Funding predictability.** Overall predictability of Government's expenditure programs is ensured by the existence of several budget tools: (i) the Three-year Program Budget for 2023-25, developed in the context of the Budget Law; (ii) the annual performance project endorsed by the Parliament which describes the key programs, the associated budget and PIs; and (iii) the annual performance report which summarizes the results achieved and the budget executed for a given year. Overall, as per the 2017 Public Expenditure Financial Accountability (PEFA) assessment, the predictability of the Government's expenditures is robust with the indicator on predictability rated A based on timely release of the budget appropriations to the budget holders. The Program expenditures are already planned as part of the PACTE-ESRI and included in the three-year programming of the Budget Law. The total budget of MESRSI rose by 33.14 percent over the past four years, from US\$1.13 billion in 2019 to US\$ 1.5 billion in the 2023 Budget Law, which shows continuity in budget allocation.
- **Adherence of the budgeted program expenditure and execution according to government priorities.** The activities contained in the expenditure framework meet the directions set by the Government of Morocco (GoM). Moreover, the program's budget structure is clear in terms of sources of funding, budgetary vehicles and categories of expenditures. The PEF is grounded within the General Budget of the State. All expenses are programmed in line with the Classification of the Functions of Government (COFOG) and will be incurred between 2024 and 2029.

Economic Justification

12. **Program Benefits.**⁸⁰ By improving academic preparedness of graduates, increasing the graduates in high demand fields with skills shortages, providing graduates with soft, digital and language skills, improving the curriculum relevance and teaching quality, it is expected that employment opportunities will gradually rise. This would have a positive impact on productivity. The Program would also impact graduates' labor remuneration, responding to the additional knowledge and skills provided by bachelor/undergraduate university programs. Approximately 1.13 million students are expected to benefit yearly from the various Program activities.

⁸⁰ This section presents the economic and financial analysis of the Program. The cost-benefit analysis quantifies the Program benefits and costs where data is available to compute the IERR. In particular, those interventions related to P2 (Higher education) and P4 (Social Support) of the Government program. The analysis focuses on the expected impacts of improving the quality and labor market relevance of public universities bachelor programs. The estimations are based on assumptions regarding both costs and benefits, aligned with the objectives of the Program.



13. **With improved academic, digital and language skills, career guidance and orientation, better support systems and targeting for the most vulnerable and attending universities with higher quality standards, graduates are expected to benefit from positive impacts both in employment and income.** In terms of employment, it is assumed that average employment rates one year after graduation would increase by 10 percent as the result of a better match with the required skills, widening the gap between tertiary education and high school diploma workers by 5 percent. The benefit stream is estimated for the duration of the work life of graduates (from 25 to 65 years).

14. **Costs.** The average Program cost per student is US\$188 per year.

15. **Efficiency and externalities.** Program efficiency is evaluated with a cost-benefit analysis that compares the estimated Program costs with the expected benefits. It is expected that the Program will generate an IRR of 17 percent and its benefits will exceed its costs with a benefit/cost ratio of 5.9 (assuming a discount rate of 5 percent). From a social perspective, the Program would raise human capital endowment, have a positive impact on growth⁸¹ and therefore reduce poverty rates. Its impact on the society as a whole goes beyond individual outcomes, since a more educated population has better health, less crime, higher democratic participation, more environmental consciousness, among others.⁸² Since the programs involved are also aimed at improving educational quality, all these effects are largely augmented.⁸³ The current analysis would only capture direct monetary individual effects, but the benefits are broader as better educated individuals also benefit from improved health and greater life satisfaction, and society enjoys the multiple positive externalities provided by a more educated population. Moreover, the positive effect of the Program on quality translates into an increase in the returns to education that is more difficult to predict and quantify and is thus not included in the economic analysis. Therefore, the economic benefits that are computed are a lower bound of the Program's potential returns.

⁸¹ As in an augmented Solow model.

⁸² See Acemoglu and Angrist (2000) and Moretti (2004) for more on social returns to education.

⁸³ See Patrinos and Saellariou (2008) and Bertschy et al. (2009) for more on the impact of quality on earnings and Hanushek and Woessmann (2008) for more on its effect on growth.



ANNEX 3. SUMMARY FIDUCIARY SYSTEMS ASSESSMENT

Objective, Methodology and Scope of the IFSA

16. **The IFSA was carried out following the Bank Policy and Bank Directive: “Program-for-Results Financing” and following the Bank Guidance Notes for “Program-for-Results Financing”.** The IFSA objective was to examine whether Program systems provide reasonable assurance that the financing proceeds will be used for their intended purposes, with due attention to the principles of value for money, economy, efficiency, effectiveness, transparency and accountability.

Summary of Risks and Fiduciary Actions

17. **Summary of fiduciary risk mitigation measures.** The overall residual FM and procurement risk of the Program is assessed as *Substantial*. The IFSA concludes that only upon implementation of the agreed fiduciary mitigation measures will the Program’s fiduciary systems provide reasonable assurance that the financing proceeds will be used for the intended purposes.

18. **The following key fiduciary risks were identified:**

- *On the procurement front:* challenges in (a) adopting and operationalizing the new PPD, which might impact the quality and timeliness of procurement due to the shift, as of September 1, 2023, from the use of specific procurement regulations to the new PPD; and (b) capacity for procurement planning due to the adoption of the PPD which requires the preparation of a 3-year procurement plan; and (c) slow procurement-related complaints handling mechanism; and (d) a lack of a suspension and debarment check mechanism, which might result in awarding a contract to firms and individuals debarred or suspended by the Bank.
- *On the FM front,* risks include (a) delayed execution of budgets by the universities and ONOUCS due to delays in approving and notifying university budgets and frequent rejection of files by government accountants *Trésorier payeurs*; lengthening the time between the end of contract execution and the actual invoice payment date; (b) delayed preparation of consolidated financial statements and submission of Program audit reports due to the following risk factors and constraints (e.g., large number of implementing entities requiring an effective and adequate fiduciary coordination mechanism in addition to the lack of familiarity with PforR financing instruments of all the entities involved in the Program; use of “Excel” spreadsheets, in absence of an Integrated Financial Management Information System, to prepare consolidated financial reports by the PMT, which may impact their quality and timeliness); (c) lack of effective internal audit function in most of the universities and MESRSI to follow up on audit recommendations and; (d) lack of effective and appropriate tools and formal mechanisms to monitor and report fraud and corruption cases in most of the implementing entities.

19. **Specific systems and capacity strengthening and mitigation measures and time-bound actions are included in the Program design and the PAP** to address the above risks and ensure adequate budget and procurement execution of the public expenditure framework, effective accountability and transparency mechanisms and achievement of expected results.

20. **The Program ex-ante and ex-post arrangements were found adequate to address the risk of fraud and corruption.** These arrangements comprise several effective institutions playing complementary roles (the Ombudsman office, the Court of Accounts, INPPLC and the General Inspectorate of Finances (*Inspection Générale des Finances, IGF*). The PMT will be responsible for reporting any case of fraud and corruption. The PMT will collect, with support from the



abovementioned institutions, and report to the Bank allegations occurring under the Program via the semiannual progress reports during Program implementation.

Legal and Institutional PFM Framework in Morocco Applicable to the Program

21. **The legal and institutional PFM framework is deemed acceptable for the Program.** Morocco's compliance with rules and regulations and existing accountability arrangements provides an adequate framework for the use of public funds and PFM is considered broadly transparent. Specifically, the Organic Law No. 130-13 relating to the Finance Laws (*Loi Organique relative aux lois de finances*) promulgated on June 2, 2015, introduced the three-year budget Program (*Programme Budgétaire Triennal*) in its article 5⁸⁴ and the program budgeting, which uses statements of missions, goals and objectives to explain how the money is spent. Overall, the planning and budgeting of all central entities (e.g., directorates of the MESRSI) involved in the Program follows a structured, timely and disciplined process consistent with the country's PFM cycle and ensures that allocations fit within the available budget envelope. ONOUSC and the universities implementing the Program RAs are subject to Law No. 69-00 relating to state financial control over public enterprises and other bodies. Planning and budgeting are well formalized through formal procedures applicable to ONOUSC and universities. No specific challenges were noted at the level of ONOUSC and universities in terms of planning and budgeting procedures. However, a review of the dates of approval of the Entities budget by the MEF and transfer of budget envelopes to universities and ONOUSC shows significant challenges.

22. **The Program procurement will follow the national procurement procedures and regulatory framework.** Procurement and award of contracts under the Program will be governed by the new PPD No. 2-22-431 published in Official Bulletin No. 7176, dated March 9, 2023. The PPD aligns with the best practices of international economics, efficiency, fairness, and integrity.⁸⁵

Sustainability, Structure, Adequacy, Effectiveness and Credibility of Budgets

23. **Fiscal sustainability.** Morocco's PFM system is considered adequate, and risks are Moderate. Despite a tightening fiscal space, Morocco's overall medium-term fiscal outlook is adequate to ensure the program's sustainability. The overall costs of the supported Program, including the portion financed by the Bank, are expected to be integrated into the budget laws 2024-2028. Planning and budgeting related to this Program will follow national procedures. Based on budget instructions/circulars, the teams of the various implementing entities under the responsibility of the Directorates in charge of budget and financial affairs of each participating entity will prepare the Program budget considering the limits of allocations set by the GoM and the Program. The Program's consolidated budget will be integrated into the budget of line ministries and implementing entities.

24. **Program financial sustainability.** The Program's activities in the expenditure framework meet the directions the GoM and the entity authorities set. The Program *budget structure* is clear regarding sources of funding, budgetary vehicles, and categories of expenditures.

⁸⁴ Article 5 describes that the "the annual budget law is drawn up by reference to a three-year program updated each year in order to adapt it to the country's changing financial, economic and social situation. This programming aims to define, according to realistic and justified economic and financial assumptions, the evolution over three years of all the resources and expenses of the State."

⁸⁵ The new decree aims to consolidate the public procurement system to provide more clarity to economic actors and improve the business climate. It also seeks to open opportunities for innovation, for new procurement features and approaches such as competitive dialogue and for small businesses and self-employed individuals (self-entrepreneurs) and establish a national preference for domestic products. Furthermore, the new procurement decree includes provisions to strengthen transparency, fight corruption, promote data analytics through the establishment of a procurement observatory and to promote sustainable development. Notably, the new decree includes a scoring system (rated criteria) that considers factors beyond price, such as an enterprise's ability to deliver a project on time and environmental criteria.



25. **Several budget tools ensure the sustainability of participating entities' expenditure framework.** First, the three-year budget programming developed in the context of the Public Budget Law, with the current three-year budget programming covering 2023 to 2025 and annually updated through the Budget Law. Second, a new multi-year Program approach, deployed in 2019 with the support of the MEF, complements the three-year budget programming. Third, the annual performance plan endorsed by Parliament describes the key programs, the associated budget, and performance indicators. The Program budget lines are thus strongly anchored in the State Budget and prioritized by the GoM.

26. **Funding predictability.** As per the 2017 PEFA, the predictability of the GoM's expenditures is robust, with the indicator on predictability rated as A with the timely release of the budget's appropriations to the budget holders. The draft report dated June 2023 of the ongoing 2023 PEFA assessment confirmed this performance. The Program expenditures are already planned as part of the PACTE- ESRI and are therefore included in the three-year programming of the Budget Law. The expenditures planned for 2023 are programmed in detail in the Budget Law. No specific issue related to funding predictability was identified in Morocco's ongoing PforR operations. The MESRSI's total budget allocation has increased by 33.14 percent between 2019 and 2023.

27. **Budget structure.** The Program budget structure is clear regarding sources of funding, budgetary vehicles, and categories of expenditures. The PACTE-ESRI is registered with the Expenditure nomenclature heading Investment Chapter (MESRSI). The Program will utilize Program P907; P908; and P909 through Chapter 12.120.10.000 (Operating budget-materials/equipment and miscellaneous expenses), and Chapter 12.220.10.000 (Capital budget). The General Budget of the State is the funding source of the PACTE-ESRI, which includes subsidies to ONOUCS, and the 12 public universities involved in the Program. Its budget structure is aligned with the General Budget of the State, which is conformed with the international budget classification (COFOG) as confirmed by the 2017 last PEFA report and by the preliminary findings of the ongoing 2023 PEFA (rated A) and will be incurred between 2024 and 2029. Expenditure will be subject to procurement following the country's new PPD. No specific activity or expenditure has been identified as a high-risk activity.

28. **Planning and budgeting on FM point of view, are well formalized through formal procedures applicable to ONOUCS and universities.** For programming, all universities use E-budget. However, a review of the dates of approval and notification of budget envelopes to universities and ONOUCS by the MESRSI, revealed some delays.

29. **Program Procurement profile.** Based on the PEF, only 7 percent of the Program expenditures under RA1 and RA2 may involve procurable items. The main procurable items will include small value contracts (and Purchase Orders, Pos) for consulting and non-consulting services and goods to implement training programs.

30. **The Program is not expected to procure any large contracts valued at or above the OPRC thresholds** (US\$75 million for works, US\$50 million for goods and non-consulting services and US\$20 million for consultant services), which are based on a *Substantial* risk rating.

Budget Execution

31. **Overall, the Ministry and Entities involved in the Program had acceptable performance regarding budget commitments and execution (payments) in 2020-2022.** The level of execution of the MESRSI's overall budget (salaries excluded) is considered satisfactory and is above 87 percent over the three years, with a payment rate of around 98 percent. The same trend is observed for the execution and payment of capital expenditures.

32. **ONOUCS is executing its budget well overall**, particularly operating budget, with commitment and payment rates more than 95 percent and 54 percent (additional efforts are needed). On the other hand, while the commitment rate for



the investment budget is almost 100 percent, payment rates hardly exceed 21 percent. Execution of scholarships is well managed and monitored; above 90 percent.

33. **The overall performance of universities (based on responses received) in executing their budgets remains heterogeneous.** Indeed, while commitment rates remain at an acceptable level, averaging over 90 percent, payment rates require improvements, rarely exceeding 60 percent, except for one university for which data was received. For execution, each university has its own information system. An action is included in the PAP to monitor the improvement in budget approval by the MEF and transfer of financial allocations to the universities and ONOUCS.

Funds Flow Arrangements for Program Implementation

34. **Treasury management and funds flow, including DLIs' disbursement to the Treasury Bank Account.** The funds flow arrangements for the Program implementation are adequate. The Program funds will be reflected in the Government budget under the MESRSI (DBAG, ONOUCS and the 12 public universities). The expenditures of the Program are identified in the State budget through the Budget Law and detailed in the annual budgets of the participating entities (DBAG, ONOUCS and the 12 universities). All the implementing agencies will use the government's treasury single account to make payments under the Program. The GoM's controls institutions will reserve the right to verify the expenditures ex post, and actions might be requested for any non-compliance with the rules. The IFSA team did not identify any serious concerns with respect to the proposed funds flow during the assessment. The funds will be disbursed to the government's Treasury Single Account for advances, prior and achieved results. MEF has set up an Observatory of Payment Delays through its Directorate for public enterprises and privatization information system called "MASSAR".

35. **Accounting.** In Morocco, all financial and accounting operations of the government are carried out, controlled, and accounted for according to the public sector accounting standards presented in the Public Accounting Decree No. 330-66 (21/04/1967) (*Décret sur la Comptabilité Publique*), which is on a cash basis. Participating Directorates from the MESRSI will apply similar accounting standards for the Program using the Integrated Expenditure Management system (*Gestion Intégrée de la Dépense, GID*), an integrated set of computerized applications developed in-house. No specific issue was noted as showed in the assessment of the DBAG which is responsible managing the budget of the entire directorates of the MESRSI. ONOUCS's accounting is limited to budgetary accounting, which makes it possible to monitor the execution of the budget in terms of both expenditure and income. Monthly and annual statements are drawn up. Budget execution and payments and accounting follow the principles and procedures described above for the public expenditure chain but are not recorded through the GID. According to the standard organization chart applicable to all universities, a Budget and Financial Affairs Division is to be set up, comprising the Budget and General Accounting Department. The review showed that only budgetary accounting is in place in the universities. The budget is executed and paid following the public expenditures chain. However, these universities do not use the GID to execute the budget and to record their transactions. For execution of their budget, each university has its own information system including Spreadsheets "Excel". In addition to the absence or inadequacy of information systems, the transition from public or budgetary accounting to private sector accounting system (double-entry accounting) will also be confronted with the preparation of opening balance sheets (e.g., assets and liabilities).

36. **Financial reporting.** Through the PMT, the MESRSI will oversee the preparation of the Program's consolidated annual financial statements and periodic budget execution reports and monitor the execution of the PEF against the DLI achieved. The consolidated financial statements of the Program include the financial statements prepared by participating entities, mainly the DBAG, ONOUCS and public universities. The DBAG will centralize financial information and oversee the work of the PMT, including financial reporting. The Program's budget execution reports and consolidated interim financial statements will be prepared on a semester basis by this PMT and reflected in the periodic activity reports. The



annual financial statements will include the financial execution of each RA, and the data will be collected from participating entities. The head of the FM team of each university and ONOUCS will be responsible for preparing and submitting to the PMT the financial reports on the budget execution of their activities implemented.

Procurement Processes and Procedures

37. **MESRSI, ONOUCS and universities' procurement systems are overall acceptable, and they provide reasonable assurance on the achievement of the core following principles:** (a) free access to public procurement; (b) equal and equitable treatment of bidders; (c) fairness and protection of bidders' rights, and (d) transparency. Additionally, the implementing agencies' procurement systems adhere to the rules of good governance and provide for sustainable procurement.

38. **Record Keeping and Document Management Systems.** Based on information collected from implementing agencies, the implementing agencies have well-established archiving systems that allow for keeping records of all procurement transactions for at least five years.

39. **Controls, oversight of procurement and audits.** In Morocco, public procurement oversight during the procurement and contract award process is mainly performed by the General Treasury of the Kingdom (*Trésorerie Générale du Royaume, TGR*) for the State and Territorial Collectivities; and by DEPP for public establishments and enterprises including universities. While each agency conducts its procurements, the TGR and DEPP oversee a network of "public comptrollers," who sit on tender committees. Furthermore, the TGR has implemented the Moroccan Public Procurement Portal (e-Government Procurement) and integrated systems to track and implement budget spending and process payments (GID). In addition to TGR, the Court of Accounts (CoA) conducts post-audits on procurement and issues reports identifying weaknesses or irregularities shared with the public. The CoA's jurisdiction covers all government acquisitions, including those implemented by local governments and state-owned entities. CoA audits are conducted on a systematic basis and are not done randomly. While CoA does not have a specialized task force for procurement, it has many technical experts who have specialized knowledge of each of the sectors covered by CoA.

40. **E-Government Procurement (e-GP).** The TGR hosts a well-established e-Government Procurement (e-GP) system (Moroccan Portal of Public Procurement: www.marchespublics.gov.ma). Following the Minister of Economy and Finance Order (*Arrêté*) No. 1982-21 dated December 21, 2021, on the digitalization of public procurement procedures and financial guarantees⁸⁶, the State, the Territorial Collectivities, as well as some public entities are required to comply with full digitalization of electronic submissions and bid securities. A recent assessment by the Bank of the Moroccan e-GP system concluded that the system is generally compliant with Multilateral Development Banks' e-GP Guidelines and the Bank will gradually start accepting the e-GP system in the Bank-financed contracts under investment (IPF) Operations.

41. **PPD has a complaint-handling mechanism.** A bidder can go for an administrative appeal to the National Commission of Public Procurement (CNCP) and court at any time. On average, CNCP decides in about 103 working days, much higher than the 30 working days period outlined in the decree established by the CNCP.⁸⁷ Therefore, there is a need to strengthen the Program's procurement-related complaints handling mechanism by maintaining a dedicated register to

⁸⁶ https://www.marchespublics.gov.ma/pmmp/IMG/pdf/arrete_demat_bo_7106_07_07_2022_fr.pdf.

⁸⁷ As per Article 32 of Decree No. 2-14-867 of September 21, 2015 establishing the National Public Procurement Commission, the handling of complaints shall be carried out by the competent bodies of the commission in accordance with a maximum period of fifteen (15) working days from the date of receipt of the complaint letter. This period may be extended for a period of fifteen (15) working days by a reasoned decision of the president of the commission, which shall be notified to the interested parties.



report on procurement-related complaints. A list of debarred firms is also on the e-GP portal (*Portail Marocain des Marchés Publics*).

Internal Control System

42. **The internal control systems applied for MESRSI are well-defined and adequate but there is a need for further operationalization of the internal audit function.** No internal control systems issues were reported in the line ministry as per the latest internal audit reports. However, MESRSI does not have an operational internal audit unit performing regular inspection and internal audit missions. MESRSI uses its IGM to perform mostly inspection duties rather than internal auditing functions. Improvements would be needed to operationalize the internal audit function within the MESRSI. On this basis, it was not possible to assess the level of implementation of internal audit action plans.

43. **The ONOUCS and universities are subject to the Dahir No. 1-03-195 of 16 Ramadan 1424 promulgating the Law No. 69-00 relating to the financial control of the State over public enterprises and other bodies** (B.O. of December 18, 2003). ONOUCS and universities are subject to prior control, which MEF exercises in charge of finance, a state controller “Controleur d’Etat”, and a treasurer “Tresorier payeur.” The review revealed a highly heterogeneous level of capacity, effectiveness, and efficiency of these entities’ internal control systems.

44. **ONOUCS’s internal audit function is carried out by the Internal Audit and Management Control Department, reporting directly to the ONOUCS director.** The department was set up in February 2021, and currently consists of a department head and one member of staff. This function is very effective at the ONOUCS. The department carried out 5 major assignments covering procurement, including major contracts, internal procedures, scholarships, and university residences, from 2021 to December 2022. Some 72 recommendations were made. However, the review revealed that these recommendations are still in the process of being validated. On this basis, it was not possible to assess the level of implementation of internal audit action plans.

45. **In accordance with the decree and ‘arrêtées’ that create universities, an internal audit, management control and quality assurance department must be set up and operational in each university:** Overall, the internal audit function was either not created (60 percent of universities that responded to the questionnaires) or when created, in most cases, is ineffective.

46. **Measures will be adopted to ensure the effectiveness of the operationalization of the new internal audit unit at the MESRSI mainly the universities and ONOUCS:** In line with the new decree requiring the implementation of the internal audit function in the departments, the PforR operation will support the operationalization of the function in the MESRSI.

Fraud and Corruption

47. **Risk of fraud and corruption.** The arrangements for fraud and corruption comprise several effective institutions playing complementary roles: Ombudsman Office, Court of Auditors, the General Inspection of Territorial Administration (*Inspection General de l’Administration Territoriale, IGAT*), the INPPLC and IGF. The INPPLC is an Independent national institution with legal personality and financial and administrative autonomy. It is also possible to case of frauds, and corruptions and complaints be transmitted by departments ministerial through general inspections ministerial (IGM) and IGF. The INPPLC annual report does not really provide sufficient details on cases of fraud and corruption, and specifically on those relating to operations financed by the Bank. Similarly, the majority of universities, ONOUCS and DBAG interviewed during the IFSA stated that they had no statistics on cases of fraud and corruption because of the lack of mandatory failure to report. The IFSA team was unable to assess the effectiveness of these institutions in the portfolio



and the supported Program due to the lack of sufficient data. Therefore, for this operation, additional efforts are required and compliance with actions to fraud and corruption will be monitored over the implementation period.

48. **Actions related to fraud and corruption.** The Borrower commits to implement the Program following Bank's Anti-Corruption Guidelines "*Guidelines on Preventing and Combating Fraud and Corruption in Program-For-Results Financing Dated February 1, 2012 and Revised July 10, 2015*". The borrower will report to the Bank allegations occurring under the Program through the bi-annual and annual progress reports during Program implementation.

Program Audit

49. **External audits of universities by the CoA or IGF and IGM of the Ministry are not frequent and there is a need to institutionalize the follow-up of audit mission recommendations.** Of the 7 universities that responded to the questionnaires, only three were subject to external audits between 2019 and 2023. For these audited universities, the follow-up and level of implementation of these recommendations remains weak, notably in the absence of an operational internal audit function. The action plan resulting from ONOUSC's institutional, operational and management audit conducted in 2018 by the MEF-DEPP is being closely monitored by its Internal Audit department. At the central level (e.g., DBAG), the CoA carried out specific missions between 2017 and 2020 to evaluate particular aspects of the MESRSI management. Several recommendations to address the weaknesses and risks identified following the missions were made by the CoA. However, there is a need to institutionalize the follow-up of audit mission recommendations and the effectiveness of the internal audit function within the sector remains a priority.

50. **The arrangements for the external audit of the Program consolidated annual financial statements will follow the same arrangements for most Bank-financed operations in Morocco.** These arrangements, which rely on the IGF, are deemed adequate with audit reports of good quality. The IGF will audit the consolidated financial statements prepared by the MESRSI PMT led by the DBAG. The IGF will conduct the audits of the Program annual consolidated financial statements based on agreed terms of reference. The audit reports and detailed management letters will be submitted to the Bank no later than nine (9) months after the closure of accounts. The Program would comply with the Bank disclosure policy of audit reports within two months of the report being accepted as final by the team and the Bank.

Fiduciary Management Capacity Assessment of Implementing Agencies

51. **Overall, the assessment of the capacity of the fiduciary staff of the entities involved in the Program concluded to the need to implement a capacity building program.** The assessment of staff capacity, both at the level of MESRSI and the universities and ONOUSC, identified the capacity challenges of the staff as the main impediment that could affect implementation of the Program. The PMT led by the DBAG will need to be trained to ensure smooth implementation of the Program. This PMT will include a fiduciary officer ensuring cooperation and consolidation of the Program's financial and procurement information prepared by each implementing entity (universities and ONOUSC). The Program will include at each level: (a) appointment/assignment of fiduciary staff based on terms of reference acceptable to the Bank, and (b) capacity building activities aimed at building the skills of all fiduciary staff of implementing agencies.



ANNEX 4. IPF FIDUCIARY APPRAISAL AND IMPLEMENTATION ARRANGEMENTS

Fiduciary Mechanisms and Implementation Arrangements

1. **Organizational arrangements and staffing.** DBAG will oversee contract execution and fiduciary management and centrally collect all technical and financial data related to TA with inputs from other MESRSI directorates, which will be used to prepare reports, annual activity reports, and consolidated financial statements for the entire Project. Detailed reporting guidelines will be included in the OM. DBAG has adequate staff but no experience with the Bank-financed IPF instrument. A FM consultant will be recruited to support the DBAG in the implementation of fiduciary activities and disbursement operations. An annual work plan and budget will be prepared and submitted to the Bank for no objection. A DA will be opened.
2. **Flow of funds.** The project will use the single account system of the Moroccan Treasury managed centrally by MEF. Project funds for TA will be disbursed to a DA to be opened at Bank Al-Maghrib as part of the Treasury single account. Further advances to the designated project account will be made based on the use of the previous advance. The DBAG will report (through the MESRSI) on the use of the proceeds of the advanced loan to the designated project account in accordance with the disbursement letter.
3. **Disbursement terms.** Disbursements under the TA component will be made primarily in the form of reimbursements based on the Statements of Expenditures. Loan proceeds will be disbursed in accordance with the Bank's disbursement guidelines. Transaction-based disbursement will be used under this TA. Accordingly, requests for payment from the loan account will be initiated using a withdrawal application for direct payments, refunds, or replenishments to the DA. All withdrawal applications will be accompanied by the appropriate supporting documentation, including for repayments and replenishments to the DA. Authorized signatories, their names, and corresponding specimen signatures will be submitted to the Bank before receipt of the first replenishment request.
4. **Reporting.** The DBAG will develop semiannual financial status reports. The IFRs will include: (a) statement of sources and uses of funds, showing the sources of funds received and TA expenditures, showing semiannual, annual, and year-to-date balances; (b) DA reconciliation statements reconciling the beginning and end-of-period balances; and (c) statement of TA commitments, that is, unpaid balances undersigned TA contracts. All TA-related invoices, whether advance payments or committed expenditures, will be subject to applicable government controls and procedures. The agreed-upon IFR template will be included in the OM.
5. **External audit.** The DBAG, in consultation with the DSSI, will be responsible for the preparation of the TA financial statements. The annual audit of the TA financial statements will be conducted by the IGF. The audit report will be sent to the Bank no later than nine (9) months after the end of the fiscal year under review. The terms of reference will be discussed with the auditor no later than three months following the effectiveness of operation. The capacity of the DBAG to prepare the Program financial statements has been assessed and found satisfactory with the implementation of risk mitigation activities. The audit report and opinion will cover the TA financial statements, reconciliation, and use of the DA, use of direct payments, and claim-based withdrawals. In addition, the IGF is required to prepare a 'Letter to Management' identifying any observations, comments, and deficiencies in the system and controls that the auditor deems relevant and must provide recommendations for their improvement.
6. For FM arrangements of the **IPF component**, the PMT has no previous experience in Bank FM procedures and requirements. No FM tools are in place including FM manual and accounting software. A FM officer assigned 100 percent to the project will be appointed. The team will be required to prepare an FM manual as part of the OM, an annual work



program and budget by November 30 every year as well as to open at the central bank, a DA on terms acceptable to the Bank. Unaudited IFRs will be prepared on a semester basis and submitted to the Bank 45 days following the end of each semester. The ceiling of the DA and the disbursement method (report-based disbursement or transactions-based disbursement) and frequency of the submission of withdrawal applications are stated in the DFIL. Reimbursement and Direct payment methods will be available. The audit report is due 9 months following the end of each calendar year.

Procurement Appraisal and Implementation Arrangements

7. **Applicable Procurement Regulations.** The procurement process for the IPF component will primarily involve consulting services and will adhere to the Bank Procurement Regulations for IPF Borrowers (Regulations) dated September 2023, along with other provisions specified in the Financing Agreement. Additionally, the Bank's 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, shall apply. The project will use the Bank's Standard Procurement Documents (SPDs) for all procurements conducted through open international procurement procedures. Furthermore, the national procedures outlined in the Moroccan PPD No. 2-22-431 of March 8, 2023, along with additional provisions specified in Section V of the Bank's Procurement Regulations, may be applicable as needed.

8. **Procurement oversight and audits.** The MEF/TGR conducts procurement oversight and audits during project implementation. Additionally, the CoA has the authority to carry out oversight in the form of audits.

9. **Complaints.** All complaints must be recorded by the borrower in the Systematic Tracking of Exchanges in Procurement (STEP). Complaints related to contracts for which the Bank's SPDs are required shall be administered and handled in accordance with the Bank's Procurement Regulations. Complaints concerning national procedures should be addressed by the borrower in accordance with the applicable complaint review rules and procedures acceptable to the Bank. Complaints that include allegations of fraud or corruption may necessitate special treatment. The borrower and the Bank will consult to determine any additional actions that may be necessary. In Morocco, the management of complaints in procurement using national procedures is overseen by the CNCP) through a separate competition subcommittee comprising 14 representatives from various government departments. This subcommittee provides advice on pending procurements and works to address competition and complaints issues. The CNCP reviews complaints and offers opinions to the ministries. These opinions are nonbinding and can be overruled by the ministry. All reviews are published on the Government General Secretariat's website.

10. **Procurement arrangements.** Procurement will be carried out by MESRSI through DBAG. Detailed procurement processing procedures, with defined responsibilities and business standards for each step, will be outlined in the OM.

11. **Procurement Capacity and Risk Assessment.** The Bank has completed a procurement risk and capacity assessment of DBAG including the entire contracting process: (a) planning, (b) preparing procurement documents, (c) receiving and evaluating bids or proposals, (d) finalizing, signing, and managing contracts, (e) monitoring project implementation, and (f) filing and archiving documents for audit and post-review purposes. The assessment revealed that DBAG lacks prior experience in carrying out procurement for projects financed by the Bank or other multilateral banks and international donors (Table 4.1). Therefore, the residual procurement risk is considered substantial. The Bank's prior review thresholds for projects with substantial risk, as outlined in the Bank Procedure on Procurement in IPF and other Operational Procurement Matters, will apply.

12. **Project Procurement Strategy for Development (PPSD).** The TA primarily involves the selection of individual consultants and consulting firms to assist MESRSI in improving the efficiency of the HE and research systems and the



sustainability of results achieved through (i) consulting, analysis, studies, and evaluations to inform various phases of PACTE-ESRI implementation; and (ii) capacity-building activities for MESRSI, universities, and ONOUCS.

13. **Main Procurement Packages.** The main procurement packages involve the selection of individual consultants and consulting firms to provide TA to MESRSI/DBAG. MESRSI/DBAG, with support from the Bank, has elaborated a PPSD to determine the most appropriate consultant selection approaches and arrangements for the project. Based on recent market analysis conducted as part of the latest IPF operations' PPSDs, the local market in Morocco for consulting services ensures sufficient competition and has enough qualified and experienced consulting firms. However, the larger and more complex TA packages envisioned under the project will be procured using international competitive selection procedures and the Bank's standard request for proposals documents.

14. **Procurement Plan (PP).** With support from the Bank, a PP for the first 18 months of the project has been prepared as part of the PPSD. The PP will be updated annually or as needed in consultation with the Bank team to align with the project's implementation requirements. MESRSI/DBAG will use the Bank's STEP system to prepare, approve, and update the PPs and to document procurement transactions.

Table 4.1. Key Procurement Risks and Mitigation Measures

Key Procurement Risks	Mitigation Measures
Lack of experience in implementing Bank-funded investment projects in accordance with the Bank Procurement Regulations, which may result in delays in the procurement process and the implementation of the IPF.	Including a section in the OM that clearly outlines and explains the procedures governing the procurement of the TA.
Insufficient familiarity with the various consultant selection approaches outlined in the Bank Procurement Regulations.	Training on World Bank procurement rules for MESRSI/DBAG staff involved in TA procurement.
Dual application of national procurement regulations and World Bank rules, potentially leading to delays.	Ensuring that, for the selection of consultants, procedures and approaches in line with the Bank Procurement Regulations are followed exclusively, avoiding duplication of procedures, and considering this as part of the exclusions mentioned in Article 3 of Decree No. 2-22-431 of March 8, 2023, relating to public procurement.



ANNEX 5. SUMMARY ENVIRONMENTAL AND SOCIAL SYSTEMS ASSESSMENT

1. **This assessment examines the extent to which the GoM's existing environmental and social management systems can guide the PforR environmental and social impact assessments, mitigation, management and monitoring of E&S risks.**
2. **Scope.** This work assesses how national systems incorporate recognized elements of good practice in E&S assessment and management, through due diligence, including:
 - Early identification of potential impacts.
 - Consideration of strategic and technical alternatives.
 - Explicit assessment of potential induced, cumulative, and transboundary impacts.
 - Identification of measures to mitigate negative environmental or social risks and impacts that cannot otherwise be avoided or minimized.
 - Clear articulation of institutional responsibilities and resources to support plan implementation.
 - Responsiveness and accountability through stakeholder consultation, timely dissemination of PforR information, and responsive complaint-handling mechanisms, among others.
3. **Approach.** The evaluation was prepared by the Bank team through:
 - Combination of detailed reviews of program documents.
 - Available technical literature, including government policies and regulations.
 - Surveys administered with support from the human resources department of MESRSI, as well as consultations with government staff and sector experts associated with the HE sector.
4. **Based on this analysis, the findings, conclusions, and opinions expressed in the ESSA are those of the Bank.** Prior to the launch of the Program, the draft ESSA report will be posted on the websites of the MESRSI and the Bank.
5. **A review of the E&S risks of the proposed activities was undertaken at design stage to:**
 - Confirm that no activities meeting the defined exclusion criteria are included in the PforR, in line with the Bank's ESSA guidelines.
 - Establish the initial scope of the ESSA. This includes identifying relevant systems within the PforR and relevant stakeholders for engagement and consultation.

Program Description

6. **Building on the PACTE-ESRI, the Program-for-Results (PforR) will help the government translate its vision into concrete results** by focusing on key elements and objectives that will accelerate progress in HE and scientific research, ensuring strong monitoring and support for implementation. The proposed PforR will focus on three main areas to strengthen the specific governance capabilities of the HE and research systems, and to improve the relevance of public university programs to the labor market.
7. **Categorization of the PforR's activities.** All program activities are classified as non-structural.
8. **MESRSI will be the implementing agency for the proposed Program via a MESRSI PMT, under the supervision of the MESRSI Secretary General, and in consultation with and with guidance from the National Steering Committee for the Program, consisting of the MESRSI focal point for the Program, representatives from the universities, ONOUC and MEF.** MESRSI will be responsible for the overall day-to-day coordination of the Program; the setting and monitoring of



standards and deadlines; and coordination between regulatory/funding bodies and beneficiary. The PMT oversees all Program reporting, including coordination of Program stakeholders, the results verification process, results achievement reporting and Program audits, and will be the focal point for the Bank.

Environmental Risks

9. **A two-stage filter was applied regarding environmental risks in line with the Bank's PforR policy approved by the Board of Directors (paragraph 10):** "Activities deemed likely to have significant, diverse or unprecedented negative impacts on the environment and/or affected people are not eligible for PforR financing and are excluded from the PforR Program". As a first step, the list of activities proposed for Program financing was analyzed in the light of the exclusion criteria set out in paragraph 14 of the Bank Guidance Program-for-Results Financing E&S Systems Assessment. Secondly, the potential negative environmental impacts of the investments were deemed reversible and concern only induced effects were examined specific mitigation measures. The mitigation measures are known and their implementation will enable the negative impacts to be avoided.

10. **The potential adverse environmental effects of the proposed activities are *low to moderate*.** The screening sheet in the appendix section will be used first to check the eligibility of activities, and then to categorize them according to their level of E&S risk. Depending on the level of E&S risk, the focal point will use these screening sheets to determine the appropriate safeguard instrument to accompany the implementation of the activity in question, and to ensure E&S monitoring and reporting.

Social Risks

11. **Approach.** The Bank's social team attended multiple meetings and visits with the presence of key MESRSI and university stakeholders and conducted research to gather information and support the assessment of the social risks associated with the program's activities. Two questionnaires⁸⁸, were prepared and shared with MESRSI Directorate of Human Resources, and ONOUC.

12. **The social risks⁸⁹ identified were as follows:**

- (a) **Sexual exploitation, abuse, harassment, and GBV - Substantial.** According to national statistics, 82.6 percent of women in Morocco have experienced at least one form of violence in their lifetime and 57 percent over the last twelve months.⁹⁰ Given the prevalence of GBV in Morocco, the common social norms and the generally weak or non-existent prevention and response mechanisms, the risk of SH is substantial. The risk of SH manifests itself in different forms and contexts:
- SH perpetrated by staff/teaching staff on staff/teaching staff.
 - SH perpetrated by male students on female students.
 - SH perpetrated by staff/faculty on female students.
 - SH perpetrated by students on staff/faculty.

⁸⁸ The questionnaires were designed to gather information on the management of MESRSI's social systems, in particular on SH/SEA prevention and intervention, on the various actions to ensure the social inclusion of people with disabilities and special needs, and on general efforts and initiatives to support students, staff and faculty on various social aspects.

⁸⁹ Potential impacts, not findings.

⁹⁰ Report on violence against women and girls, National survey on violence against women and men 2019. Rabat: HCP; 2021



SEA, on the other hand, occurs mainly against female university students. All female students are at risk of SH and exploitation by peers, staff, or faculty. That said, research shows that female PhD students are particularly vulnerable to SEA, due to their individual academic relationships with mentors and professors, who are often men, and the inequality of power between them, as professors control grading decisions that have a direct impact on the student's academic record and professional opportunities.⁹¹

- (b) **Exclusion of people with disabilities (Moderate).** The national school enrolment rate for people with disabilities aged 6 to 17 is 42 percent. Approximately 79 percent of children in school aged between 5 and 17 had reached at most primary level at the time of the survey. In the case of people with disabilities aged 18 and over, only 11 percent of people with disabilities who attended a school or training establishment were able to obtain a diploma, and only 1.6 percent of people with disabilities achieved a higher level of education (Bac and above). Clearly, the exclusion of people with disabilities (reduced mobility, visual, hearing or cognitive impairments, etc.) starts way before HE. That said, universities can make amends by implementing accessibility and adaptation measures and taking campus initiatives in their respective regions. The implementing agents of the program's activities need to be mindful of this inherent exclusion and mitigate accordingly.
- (c) **Language exclusion (Moderate).** Linguistic dynamics in Morocco are constantly undergoing significant changes and are at the center of important issues. Morocco has several languages and linguistic variants, giving it the status of a multilingual country. These languages include Moroccan Arabic or Darija, various forms of Amazigh, French, etc., but these languages are not used or recognized by institutions on an equivalent basis. Moroccan students, particularly those from public schools and rural areas, encounter difficulties with the French language, which is the language of instruction in many programs at the HE level. Indeed, these difficulties begin to manifest at an early age and solidify as they enter university. The linguistic barriers might hold back Moroccan students and prevent them from completing their university studies in the best possible conditions; in some cases, they can even be the cause of failure and abandonment of university studies.

Environmental Management Systems

- 13. **The national Environmental Impact Assessment (EIA) system was set up in 1991 and has been strengthened several times over the last twenty years.** It is now well established, integrated into the decision-making process and ensures that the environmental risks of new projects subject to EIA are adequately addressed.
- 14. **Regarding occupational health and safety, Law 65-99 (2003) on the Labor Code gave pride of place to occupational health and safety.** However, the existing legal framework could not guarantee sufficient and effective protection against occupational hazards, given the lack of cohesion and dispersion of legislative texts.
- 15. **The Program identifies the necessary actions,** such as designation of E&S focal points in each entity, as well as the E&S management training and capacity-building plan based on the E&S Technical Manual to be developed by MESRSI.

Social Management Systems

- 16. **In terms of social management, Morocco has a relatively advanced legal framework based on the new Constitution of 2011 which refers to sustainable development in the form of public participation in decision-making.** Aspects relating to equity, parity, social inclusion, information, and public participation are guaranteed, globally, by the

⁹¹ Information Report made on behalf of the delegation for women's rights and equal opportunities between men and women, June 2013.



Constitution and, specifically, by the organic laws of the regional levels of government, known as the *collectivités territoriales*.

17. **The country's constitution, and political framework place particular emphasis on the social dimension, and on the need to take it fully into account in the design, planning, M&E of public policies and programs.** Furthermore, the state today demands exemplarity from its administration in the consistent and effective application of the law.

Assessment of the MESRSI's E&S Management Capacity

Assessment of institutional capacity

18. **Environment:** Consultations with MESRSI's technical team involved in the program revealed the absence of environmental management systems. The Program identifies the necessary organization (designation of E&S focal points in each entity) as well as the training and capacity-building plan for E&S management, based on the E&S Technical Manual to be developed by the PMT.

19. **Social:** Under the leadership of the MESRSI Directorate of Human Resources, all universities are collaborating to develop a national social responsibility strategy to integrate best practices and highlight social priorities and requirements, while allowing individual universities to innovate and make progress within their respective contexts and regions.

20. **Gaps identified and mitigation measures based on the assessment of the conformity of E&S systems applicable to Program activities with the fundamental principles of the PforR policy:**

21. **Principle n°1: The Program's E&S management systems are designed to:** promote E&S sustainability in program design; avoid, minimize or mitigate negative impacts; and promote informed decision-making regarding the E&S effects of a Program. Provisions relating to program-related social risks are fragmented in different legislations. This can be explained by the fact that social risk management concerns multiple themes such as labor management, social protection/development, and women's rights, among others. In general, universities do not have sufficient and specialized resources to monitor and enforce compliance with regulations and the management of social and environmental risks. The availability of adequate staff and financial resources, the administrative and political will of the agencies responsible for enforcing legislation, and the level of awareness of laws relating to social and environmental management are essential conditions for effective enforcement. That said, and as mentioned above, universities are in the process of drawing up a national strategy dedicated to social responsibility at university level, which would certainly help to fill this gap.

22. **Principle n°3: Program E&S management systems are designed to protect public and worker safety from potential hazards associated with:** construction and/or operation of facilities or other operational practices under the Program; exposure to toxic chemicals, hazardous wastes and other hazardous materials under the Program; and reconstruction or rehabilitation of infrastructures located in areas prone to natural hazards. The borrower does not assess climate change risks associated with Program activities, such as estimating GHG emissions or including appropriate mitigation and/or adaptation measures as part of the PforR.

23. **For ESSA action plan, see Annex 6, PAP.**


ANNEX 6. PROGRAM ACTION PLAN

Action Description	Source	DLI#	Responsibility	Timing		Completion Measurement
Adopt an Operations Manual (OM), including E&S and fiduciary aspects.	Technical	NA	MESRSI	Other	90 days after effective date	OM approved by MESRSI with Bank no objection distributed to all program implementing entities.
Establish and maintain throughout the Program implementation, a Program Management Team with composition and terms of reference acceptable to the Bank.	Technical	NA	MESRSI	Other	90 days after effective date	Letter by MESRSI confirming establishment of Team and its members.
Appointment of social and environmental focal points at MESRSI and ONOUSC level.	Environmental and Social Systems	NA	MESRSI, ONOUSC	Other	90 days after effective date	Appointment letter(s) for focal points.
Appointment of social and environmental focal points at university level	Environmental and Social Systems	NA	Universities	Other	90 days after effective date	Appointment letter(s) for focal points.
Incidents/accidents must be communicated to the WB no later	Environmental and Social Systems	NA	MESRSI	Recurrent	Continuous	Notification(s) if applicable.



than 48 hours after their occurrence.						
Completion of MESRSI's strategy for social responsibility.	Environmental and Social Systems	NA	MESRSI	Other	12 months after effective date.	Strategy document.
Development of a Program prevention and intervention plan of sexual exploitation, abuse and harassment.	Environmental and Social Systems	NA	MESRSI, ONOUCS	Other	90 days after effective date and implemented throughout Program duration	SEA/SH prevention and intervention plan.
Strengthening grievance management mechanism with distinct channels for (i) students; (ii) HE staff, by filtering grievances from the Chikaya portal related to HE and scientific research.	Environmental and Social Systems	NA	MESRSI, ONOUCS	Other	90 days after effective date	System description, communication strategies and system monitoring metrics.
Capacity building in E&S management for program focal points.	Environmental and Social Systems	NA	MESRSI, ONOUCS	Other	6 months after effective date.	Training module, plan developed, training reports.
Development of stakeholder engagement plan.	Environmental and Social Systems	NA	MESRSI	Other	90 days after effective date and implemented throughout the Program duration.	Stakeholder engagement plan completed and submitted to Bank.
Preparation and implementation of procurement plans according to the	Fiduciary Systems	NA	MESRSI, ONOUCS, univ, other agencies	Recurrent	Continuous	Triennial procurement plans published no later than end



regulations in place.						of Q1 of fiscal year.
Annual budgets of universities and ONOUSC approved and financial allocations notified within prescribed timeframe (Q1 every calendar year).	Fiduciary Systems	NA	MESRSI, MEF	Recurrent	Continuous	Semi-annual Program reports include dates of approval and notification of universities' and ONOUSC financial allocations.
Develop and implement capacity building program on the new PPD.	Fiduciary Systems	NA	MESRSI, ONOUSC, universities, TGR	Due Date	31-Dec-2024	(a) capacity building plan on new decree to procurement officials and other stakeholders. (b) guidance notes on new features (rated criteria and competitive dialogue with more targeted training). (c) update of standard bid documents per new decree
Implement biannual reporting to be included in semi-annual Program report on: (1) Public Procurement and (2) Financial Management	Fiduciary Systems	NA	MESRSI, ONOUSC, univ and other agencies	Recurrent	Semi-Annually	Semi-annual Program report submitted to Bank.



Include in the bidding documents an eligibility check clause	Fiduciary Systems	NA	MESRSI, ONOUCS, universities	Recurrent	Continuous	Eligibility check clause included in bidding documents.
Develop standard procedures manual for administrative, financial, accounting and procurement management for universities.	Fiduciary Systems	NA	MESRSI, universities	Due Date	31-Dec-2025	Standard manual prepared and validated by MESRSI and each university council.
Set up an effective internal audit department and audit committee in each university in line with regulations.	Fiduciary Systems	NA	Universities	Due Date	31-Dec-2025	DLR verification report(s).
Contribute to the design and implementation of a Program to introduce general accounting system (double entry accounting system) in universities.	Fiduciary Systems	NA	MESRSI, universities	Recurrent	Continuous	Study on the design of universities' accounting organization completed. Physical inventory of university assets completed for preparing opening balance sheets. Capacity building program on double entry accounting finalized.
Develop tools and procedures for collection,	Fiduciary Systems	NA	MESRSI, ONOUCS, universities	Other	6 months after effective	Number of cases of fraud and corruption



consolidation, reporting including frequency, on fraud and corruption in the OM and identify responsible entity.					date Semi-annual	reported in Program reports.
Strengthen coordination between implementing entities and develop tools for collecting budget execution; procurement and accounting data at each implementing entity.	Fiduciary Systems	NA	WB, MESRSI	Other	6 months after effective date	Financial, procurement and budgetary information included in the semi-annual Program report and acceptable and audited financial statements prepared and submitted on time.



ANNEX 7. SUMMARY OF DLIS/DLRS CONTRIBUTING TO CLIMATE CHANGE ADAPTATION AND MITIGATION

Table 7.1 Summary of DLIs/DLRS Contributing to Climate Change Adaptation and Mitigation

DLIs	Climate Activity	Financing Amount (US\$ millions)
DLI 1 Enhancing student orientation and graduate employment tracking	This DLI will support climate change <u>mitigation</u> by providing career guidance to steer students to priority degrees (one of the four of which is green economy), selected based on the NDM green transition and labor market needs. In terms of adaptation, Morocco's economy is heavily dependent on climate-sensitive sectors such as agriculture and tourism. 38 percent of the labor force is employed in these sectors. Past extreme events such as floods, heat waves, and droughts were estimated at MAD 75 billion in economic losses in agriculture alone. ⁹² This DLI will increase climate resilience and adaptability of HE students as the priority degrees supported are high-skill careers and diversify away from livelihoods that are threatened by climate change impacts such as agriculture. Moreover, this DLI will also equip HE students with the skills to adopt climate smart practices in agriculture, liquid sanitation, waste and water management to address identified climate risks, and that would contribute toward reducing GHG emissions. For example, liquid sanitation (which includes wastewater treatment and management), and waste management can contribute to reducing GHG emissions, e.g., through removal of BOD and presence of methane capture system during treatment. Waste management could include material recovery and recycling for reuse purposes, pre-sorting and segregating at source and collecting feedstock and/or bio-waste separately.	29.3
DLI 2 Promoting student employability skills	This DLI aims to equip students with relevant skills for future jobs, including renewable energy, energy efficiency, climate smart agriculture, and water management sectors. It aims to increase awareness on climate-related adaptation and mitigation among HE students. It supports the development and implementation of power skills modules, which include modules on the SDGs. These modules comprise training related to climate change adaptation and mitigation, specifically on SDG6 Clean Water and Sanitation, SDG7 Affordable and Clean Energy, SDG11 Sustainable Cities and Communities, SDG12 Responsible Consumption and Production, and SDG13 Climate Action. The four key modules under this DLI will also enhance employability of HE students across the four priority areas, including green and resilient economy, as higher-level cognitive skills (problem solving, communication) are required to address challenges posed by climate change.	29.3
DLI 3 Adapting degree programs to the needs of the socio-economic sectors	This DLIs will support climate adaptation and mitigation as programs in the green and resilient economy include degree programs with a focus on climate change adaptation and mitigation. ⁹³ It supports adaptation efforts, as the priority degree programs supported under this DLI are high-skill careers and diversify away from livelihoods that are threatened by climate change impacts such as agriculture, aiming to build the long term resilience of targeted beneficiaries.	19.55
DLI 4 Implementing the new generation PhD program	This DLI directly finances the enrolment of students in PhD programs focused on climate adaptation and mitigation (specifically programs tailored to the green and resilient economy). As such, it supports research to support the green transition planned under the NDM.	19.55
DLI 5 Promoting Thematic Research Institutes-Networks	TRI-N will improve the knowledge base and sharing of best practices, support university collaboration and industry, and foster activities related to mitigation of and/or adaptation to climate change, such as the water-saving practices in water management.	19.55
DLI 6 Improved targeting of student scholarship program	This DLI will contribute to climate adaptation co-benefits by increasing the resilience and adaptation capacity of low-income students who are particularly vulnerable to climate, as scholarships improve their food security. Scholarship recipients account for over 40 percent of HE students, of which 27 percent live in rural areas, and, as such, are more vulnerable to the effects of climate change.	19.55

⁹² World Bank. 2013. *Building Morocco's Resilience: Inputs for an Integrated Risk Management Strategy*. Washington, DC: World Bank.

⁹³ Morocco's NDM includes *priority area 4, territories and sustainability*, as one of four priority areas, which in turn comprises *strategic choice 4: Preserve natural resources and enhance the resilience of territories to climate change*, and as part of this, to specifically "Better harness the full potential of the green and blue economies [...]".



ANNEX 8. GENDER GAPS AND ACTIONS

Table 8.1 Gender Gaps and Actions

Gap	Gender Activity	Monitoring and Evaluation
Women entering STEM careers	<ul style="list-style-type: none"> • DLI 1. Orientation platform providing career guidance by field of study to steer women towards degrees with better labor market prospects. • DLI 1. Graduate tracking employability data disaggregated by gender and field of study to update and inform the orientation and re-orientation platform. • DLI 1. Detailed analysis of potential constraints to female graduate employment using the graduate employability tracking data. • DLI 4. Priority disciplines for new generation PhD programs include mainly STEM disciplines. 	<p>Primary gender tag indicator to measure progress in closing the gap (included in the RF):</p> <ul style="list-style-type: none"> • Number of additional female new students enrolled in STEM disciplines
Social norms on gender equality	<ul style="list-style-type: none"> • DLI 2. Development and implementation of power skills modules (socio-emotional skills), which include mandatory training on sensibilization/awareness raising on GBV and on Human Rights and Sustainable Development Goals (SDGs), which includes gender equality (SDG5). 	<p>Indicators included in the RF:</p> <ul style="list-style-type: none"> • Number of students enrolled in language and power skills modules, disaggregated by module and gender • Number of female students participating in the MESRSI LeaderSHE program⁹⁴

⁹⁴ Launched in March 2022, the LeaderSHE initiative aims to strengthen leadership and a culture of creativity and innovation among female students with training courses in female leadership, networks for sharing experiences and expertise, talks, and a digital resource library.



ANNEX 9. IMPLEMENTATION SUPPORT PLAN

Table 9.1. Main Focus of Implementation Support

Time	Focus	Skills Needed	Resources Estimate	Partner Role
First twelve months	Program readiness for implementation	Task management, Operations specialist, HE/Research, Student Social Assistance/Employability tracking	Supervision Bank budget	
	Development of tools for collecting budget execution; procurement and accounting data, and capacity building actions	Fiduciary specialists		
	Development Operations Manual	Technical specialists		
	Appointment of E&S focal points, preparation of monitoring tools (Environmental and Social Impact Assessment, Environmental and Social Management Plan, SEP, E&S technical manual, GRM), training and capacity for E&S focal points	Environmental and Social Standards (ESS) specialists		
12–48 months	Technical review/Implementation support	Task management, Operations specialist, Technical specialist	Supervision Bank budget	
	FM and procurement monitoring and reporting	FM specialists	Supervision Bank budget	
	E&S monitoring and reporting	E&S safeguards specialists	Supervision Bank budget	
Closing	Sustainability	Task management, Operations support, Technical support, Fiduciary and ESS support	Supervision Bank budget	

Table 9.2. Task Team Skills Mix Requirements for Implementation Support (Template)

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Team Leader	40	8	—
Co-Team Leader	40	—	Country Office based
Financial Management Specialist	10	—	Country Office based
Procurement Specialist	10	—	Country Office based
Environmental Specialist	10	—	Country Office based
Social Development Specialist	10	—	Country Office based
Economist	20	4	—
Operations Officer	16	8	—
HE/Research Specialist	10	5	Country based
Student Social Assistance/ Employability tracking Specialist (SP)	10	5	Country Office based
PFM/governance Specialist (Governance)	8	—	Country Office based