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**The World Bank**  
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Report No: ICR00004680

IMPLEMENTATION COMPLETION AND RESULTS REPORT  
ON A  
GRANT

IN THE AMOUNT OF SDR 55.4 MILLION  
(US\$76.5 MILLION EQUIVALENT)

TO THE

SUDAN

FOR THE

Sudan Basic Education Recovery Project  
October 8, 2019

Education Global Practice  
Africa Region

## CURRENCY EQUIVALENTS

(Exchange Rate Effective July 9, 2019)

Currency Unit = United States Dollars (US\$)

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SDG 45.11= US\$1

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US\$1.38= SDR 1

FISCAL YEAR

July 1 - June 30

Regional Vice President: Hafez M. H. Ghanem

Country Director: Carolyn Turk

Regional Director: Amit Dar

Practice Manager: Safaa El Tayeb El-Kogali

Task Team Leaders: Thanh Thi Mai, Omer Nasir Elseed

ICR Main Contributor: Cristina Marosan Ling

## ABBREVIATIONS AND ACRONYMS

BEP	Basic Education Project
BERP	Basic Education Recovery Project
CEM	Community Empowerment Model
CM	Conventional Modality
CPA	Comprehensive Peace Agreement
EFA	Education for All
EMIS	Education Management Information System
ESA	Education Sector Analysis
ESR	Education Sector in Sudan Report
ESSP	Education Sector Strategic Plan
FA	Financing Agreement
FFC	Forces for Freedom and Change
FMoGE	Federal Ministry of General Education
GDP	Gross Domestic Product
GER	Gross Enrollment Rate
GOS	Government of Sudan
GPE	Global Partnership for Education
HCI	Human Capital Index
HIPC	Heavily Indebted Poor Countries
iBES	Sudan's Interim Basic Education Strategy
IDP	Internally Displaced Population
IFR	Interim Unaudited Financial Report
IMF	International Monetary Fund
INC	Interim National Constitution
INS	Interim Strategy Note
iPRSP	Sudan Interim Poverty Reduction Strategy
IR	Intermediate Result
ISP	Intermediary Support Providers
ISR	Implementation Status and Results Report
M&E	Monitoring and Evaluation
MoE	Ministry of Education
MoFEP	Ministry of Finance and Economic Planning
MoGE	Ministry of General Education
MTR	Mid-term Review
NLA	National Learning Assessment
PAD	Project Appraisal Document
PDO	Project Development Objective
PIU	Project Implementation Unit
PTA	Parents and Teachers Association
RF	Results Framework

SDG	Sudanese Pounds
SSA	Sub-Saharan Africa
SST	State Sponsors of Terrorism
TMC	Transitional Military Council
UNICEF	United Nations Children's Fund
USD	United States Dollar
VAT	Value-added Tax
WDR	World Development Report

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**DATA SHEET****BASIC INFORMATION****Product Information**

Project ID	Project Name
P128644	Sudan Basic Education Recovery Project
Country	Financing Instrument
Sudan	Investment Project Financing
Original EA Category	Revised EA Category
Partial Assessment (B)	Partial Assessment (B)

**Organizations**

Borrower	Implementing Agency
Ministry of Finance & Economic Planning	Federal Ministry of General Education (FMOGE)

**Project Development Objective (PDO)**

## Original PDO

The project development objective is to improve the learning environment in targeted areas; increase the availability of textbooks; and strengthen education planning and management mechanisms in Sudan.



## FINANCING

	Original Amount (US\$)	Revised Amount (US\$)	Actual Disbursed (US\$)
<b>World Bank Financing</b>			
TF-13351	76,500,000	76,500,000	76,472,764
<b>Total</b>	<b>76,500,000</b>	<b>76,500,000</b>	<b>76,472,764</b>
<b>Non-World Bank Financing</b>			
Borrower/Recipient	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total Project Cost</b>	<b>76,500,000</b>	<b>76,500,000</b>	<b>76,472,764</b>

## KEY DATES

Approval	Effectiveness	MTR Review	Original Closing	Actual Closing
29-Mar-2013	11-Jul-2013	18-Oct-2015	28-Feb-2017	15-Feb-2019

## RESTRUCTURING AND/OR ADDITIONAL FINANCING

Date(s)	Amount Disbursed (US\$M)	Key Revisions
28-Jan-2015	7.99	Change in Results Framework
13-Feb-2017	52.83	Change in Results Framework Change in Components and Cost Change in Loan Closing Date(s) Change in Implementation Schedule
27-Feb-2018	69.04	Change in Loan Closing Date(s)

## KEY RATINGS

Outcome	Bank Performance	M&E Quality
Satisfactory	Satisfactory	Substantial



## RATINGS OF PROJECT PERFORMANCE IN ISRs

No.	Date ISR Archived	DO Rating	IP Rating	Actual Disbursements (US\$M)
01	07-Dec-2013	Satisfactory	Moderately Satisfactory	1.31
02	14-May-2014	Satisfactory	Moderately Satisfactory	3.41
03	09-Nov-2014	Satisfactory	Moderately Satisfactory	7.62
04	09-Apr-2015	Moderately Satisfactory	Moderately Satisfactory	10.52
05	07-Oct-2015	Moderately Satisfactory	Moderately Satisfactory	24.73
06	10-Jan-2016	Moderately Satisfactory	Moderately Satisfactory	27.68
07	30-Jun-2016	Moderately Satisfactory	Moderately Satisfactory	38.03
08	11-Jan-2017	Moderately Satisfactory	Satisfactory	50.11
09	30-Jun-2017	Satisfactory	Satisfactory	63.82
10	01-May-2018	Satisfactory	Satisfactory	69.04
11	18-Jan-2019	Satisfactory	Satisfactory	75.92

## SECTORS AND THEMES

### Sectors

Major Sector/Sector (%)

**Education 100**

Public Administration - Education 9

Other Education 91

### Themes

Major Theme/ Theme (Level 2)/ Theme (Level 3) (%)



<b>Human Development and Gender</b>	<b>100</b>
Education	100
Access to Education	48
Education Financing	46
Science and Technology	2
Teachers	2
Standards, Curriculum and Textbooks	2

**ADM STAFF**

Role	At Approval	At ICR
Regional Vice President:	Makhtar Diop	Hafez M. H. Ghanem
Country Director:	Bella Deborah Mary Bird	Carolyn Turk
Director:	Ritva S. Reinikka	Amit Dar
Practice Manager:	Sajitha Bashir	Safaa El Tayeb El-Kogali
Task Team Leader(s):	Elizabeth Ninan Dulvy	Thanh Thi Mai, Omer Nasir Elseed
ICR Contributing Author:		Cristina Marosan Ling



## I. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES

### A. CONTEXT AT APPRAISAL

#### Context

1. **Country context.** Civil war and conflict between the government and southern insurgents has wrought strife on Sudan since its independence in 1956. This has resulted in the deaths of approximately two million people from starvation and famine and internal displacement of up to four million people with another 600,000 living in exile. The Comprehensive Peace Agreement (CPA) of 2005 established the basis for power sharing between the Government of National Unity and Government of South Sudan and eventually led to the referendum and creation of the new state of South Sudan in July 2011. The economy flourished in the post-CPA period with 7 percent annual growth in Gross Domestic Product (GDP) between 2005-2010. However, the economy declined due to the loss of the oil revenue between 2010-2012, with annual oil production dropping from 168 million barrels to 38 million, budgetary oil revenue from 11.5 percent of GDP to 1.5 percent, and oil exports from US\$11 billion to US\$2 billion.<sup>1</sup> The economy deteriorated with double digit inflation rates. The re-escalation of conflict in 2011-12 exacerbated people's suffering with lack of access to basic services such as health, education and food. Sudan could not access desperately needed debt relief and concessional loans due to the economic and financial sanctions against it. The legacy of the war, limited infrastructure and inequitable distribution of public goods and services continue to present obstacles to stronger and more inclusive growth. At the time of project design, Sudan had over 46 percent of the population living below the poverty line of SDG114 per month (~US\$30). Displaced populations, nomadic groups, rural populations, children and girls were especially vulnerable both to poverty and related health problems. Despite low levels of economic development and its fragile state, Sudan inherited a strong tertiary education sector with highly ranked academic institutions in Africa<sup>2</sup> which remained strong to the mid-eighties. The stark contrast between the high quality in the past and situation at project preparation underscored the need for the project.
2. **Sector context.** The general socio-economic characteristics of Sudan indicate great diversity between Sudan and other Lower-Middle-Income countries in Sub-Saharan Africa (SSA) in terms of population, standard of economic development defined by the United Nations Development Program – Human Development Index (UNDP-HDI). In 2011, Sudan was ranked 169 out of 187 economies in the HDI.<sup>3</sup> In addition, the index shows that the average life expectancy, literacy rate and combined enrolment ratios of Sudan are lower than those of other SSA and Arab countries.
3. At the time of appraisal, the statistics on gross enrollment rate (GER) for basic education showed that GER in Sudan was significantly lower (76 percent) than SSA (105 percent), in 2008-9 with significant urban and rural disparities. On average, urban children were 17 percent more likely than rural children

<sup>1</sup> The Sudan Interim Poverty Reduction Strategy Paper Status Report 2012-2014

<sup>2</sup> Three Sudanese universities are ranked amongst the top 100 African universities the THE-QS World Universities Ranking: University of Khartoum in 34th place, Sudan University of Science and Technology in 42nd place, and Ahfad University for Women in 61st place (2008).

<sup>3</sup> UNDP (2011). Human Development Report 2011. Sustainability and Equity: A Better Future for All.



to attend school. While gender parity was 90 percent on average for Sudan, girls made up only 41 percent of enrolled students in rural areas. The poor health of many Sudanese children limited their cognitive development and learning, with the average share of underweight children in Sudan (26 percent) for all states excluding Khartoum and Gezira consistently higher than the SSA average (24 percent).

4. The Status of the Education Sector in Sudan report (ESR, 2011) reported on the poor state of learning among Sudanese students and suggested underlying reasons for weak learning performance, including teacher deployment; teacher utilization; lack of textbooks; the learning environment and the poor health of students. Teachers were unevenly distributed across schools and were not in class one third of the time. Textbook distribution was inefficient with a 3:1 ratio of students to textbooks and the proportion of schools without textbooks ranged from 50 percent for grades 1 to 5 in urban areas to 30 percent for grade 5 in rural areas. Further, all school infrastructure was found to be poor and inconducive to learning. The government system for data collection was insufficient to target these inequities and provide evidence-based service delivery. Accurate data was not collected on a regular basis. The new Education Management Information System (EMIS) was not operational and the old system of information collection using year-books was abandoned. Thus, management and planning capacity would need to be built to address Sudan's challenges and achieve Sudan's Interim Basic Education Strategy (iBES) goal of "significant and measurable progress towards... access for all to basic education of good quality, and expansion of quality secondary, vocational and non-formal education supported by a strengthened education system". The budgetary allocations to education were insufficient to address backlogs and the achievement of Education For All (EFA) goals in the short and medium term. In 2008, Sudan spent 2.7 percent of its GDP toward education which was lower than its comparator countries: Egypt (4 percent), Morocco (6 percent), and Tunisia (8 percent). Education spending was 12 percent of government spending in 2009. This project represents 0.1 percent of the total sector budget. Despite the Government's commitment to education, fiscal shocks were anticipated to undermine progress. Therefore, without external support, the gains from the CPA period were tenuous at best.
5. **Rationale for World Bank support (Project context).** At the time of appraisal, the World Bank had been engaged in Sudan's education sector for five years. It was one of the local donor groups supporting development of the ESSP and ESR which helped to inform the 2012-14 iBES. Based on the World Bank's on-going involvement and experience, the World Bank accepted the Government of Sudan's (GoS's) request to serve as the supervising entity for the US\$76.5 million GPE-funded Basic Education Recovery Project (BERP). BERP was to follow up on the Basic education project (BEP, P112096) supported by the multi-donor trust fund established in 2005. To address some of the most critical immediate and medium-term pressures on Sudan's basic education system, the World Bank applied its "guiding principles" for rapid response to crises, as identified in OP/BP 8.0, in the preparation of BERP. The justification for processing BERP as an emergency project was based on the major adverse economic and social impacts arising from the impending fiscal shocks in Sudan, and the instability caused by conflict in parts of the country. BERP was aligned with the priorities set out in the iBES - targeting improvements in access, the consistent delivery of quality education, and overall systems strengthening to build education delivery capacity in Sudan.



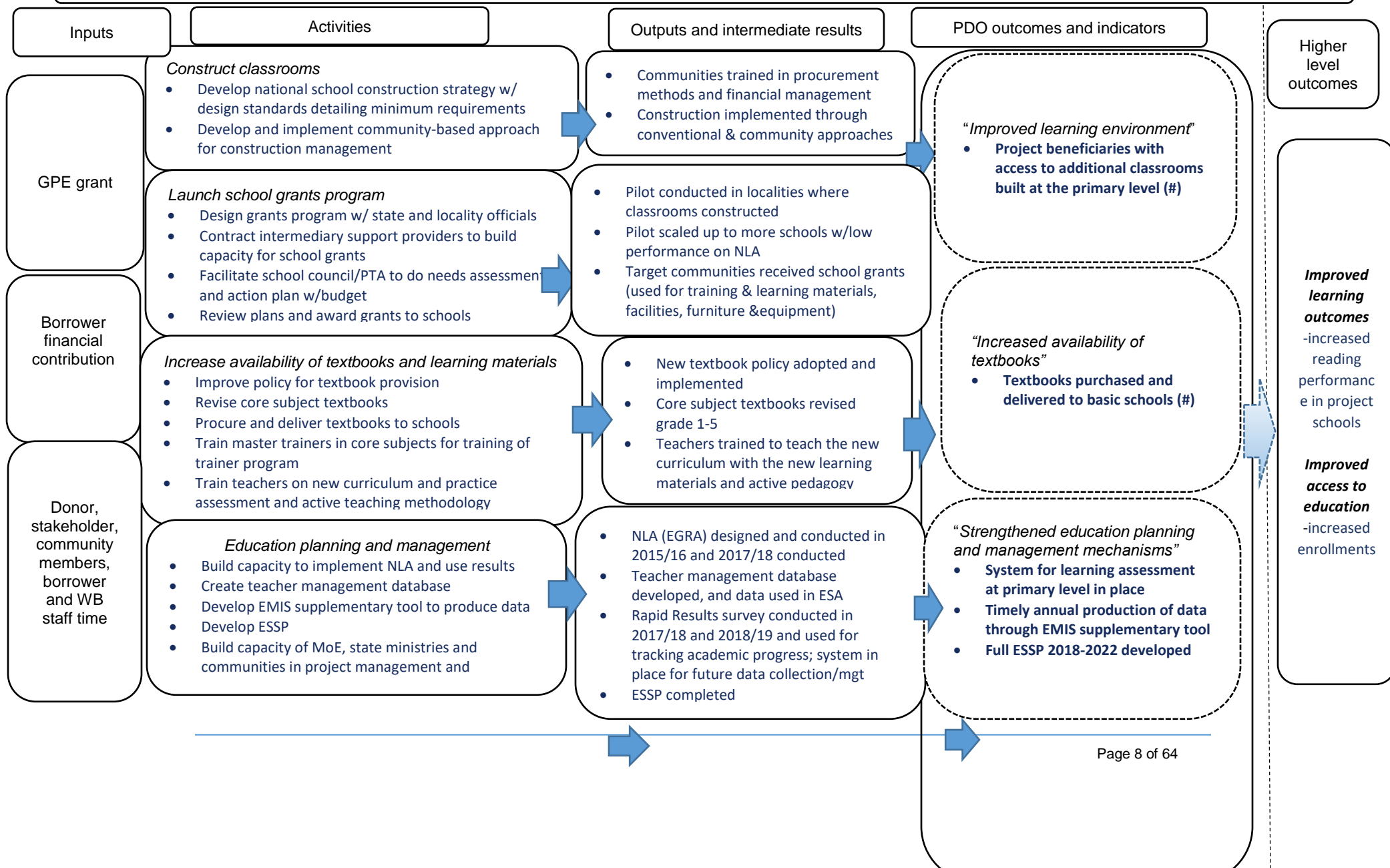
### **Theory of Change (Results Chain)**

6. Figure 1 presents the project results chain. It illustrates the key inputs, activities, outputs, intermediate results and outcomes which the project sought to achieve. The high-level outcomes to which the project contributes that goes above and beyond the PDO are improved access to education and learning.
7. To establish the foundation for increased learning, the project sought to improve learning conditions by enhancing the environment and building classrooms with essential elements such as latrines, water points, washing facilities, and fences to keep children secure. The project distributed grants so school communities could buy specifically what they needed to enhance their daily learning conditions such as equipment, desks, chairs, and other furniture for classrooms and school facilities. In addition, the project provided essential learning materials such as textbooks and teacher guides based on a revised curriculum.
8. However, providing equipment and facilities by themselves cannot improve learning: teachers and students must use the resources effectively (McEwan, 2015; IDB, 2014). Toward this end, the project included training of master trainers and teachers on the new curriculum, pedagogy and how to use the new textbooks and learning materials with students in the classroom. Thus, the results chain also included critical activities related to providing teacher guides and training on how to use the materials with students in the classroom.
9. To achieve better learning outcomes and implement the activities described above, the theory of change also required building the capacity of federal and state governments to strengthen education planning and management mechanisms. This included building a tool for rapid collection of school administrative data, establishing systems for monitoring textbook delivery and implementing national learning assessments to inform targeting of school grants and sector plans. The project logic was to establish the foundation and key elements necessary for evidence-based sector planning and management.



Figure 1. Results Chain: Sudan Basic Education Recovery Project

**PDO:** To improve the learning environment in targeted areas; increase the availability of textbooks and strengthen education planning and management mechanisms in Sudan





### Project Development Objectives (PDOs)

10. The project set its development objectives appropriately. The PDO focused on the key elements critical to influencing educational quality befitting a fragile country like Sudan. The PDO was to *improve the learning environment in targeted areas; increase the availability of textbooks and to strengthen education planning and management mechanisms in the Sudan*. The PDO statement remained the same throughout the project life cycle and was consistent in the financing agreement (FA) and project appraisal document (PAD).

### Key Expected Outcomes and Outcome Indicators

11. Given the emergency crisis context during which the project was designed, the PDO focused on the most fundamental outputs and intermediate outcomes necessary for laying the groundwork for future achievement of higher-level outcomes of improved access and student learning.
12. The first two PDO outcomes were focused on the basic elements for student learning to take place -that is, a safe learning environment (new and rehabilitated classrooms) and learning materials (textbooks etc.). Evidence shows that upgrading school infrastructure and enhancing teaching and learning materials can lead to learning outcomes by facilitating students to learn and supporting teachers to make them more effective (Glewwe et al., 2013; Krishnaratne et al., 2013). School grants were used primarily for training and learning materials, facilities, furniture and equipment for teachers and students. Hence, the theory of change for this aspect of the PDO was that constructing and rehabilitating classrooms to meet children's basic needs including latrines, washing facilities, water points and a fence, combined with textbooks, training and learning materials would provide students with a safe and conducive environment for learning, to which parents felt comfortable sending their children.
13. **The key PDO and intermediate results (IR) indicators for outcomes 1 and 2 include:**
  - PDO 1: Project beneficiaries with access to additional classrooms built at the primary level, resulting from the project (#)
  - IR: additional classrooms built or rehabilitated at primary level resulting from project interventions (#)
  - IR: communities receiving school grants (#)
  - IR: communities receiving school construction management training (#)
  - PDO 2: Textbooks purchased and delivered to basic schools (#)
  - IR: new textbook policy adopted and implemented
  - IR: revision and development of core subject textbooks
14. The third aspect of the PDO focused on strengthening education planning and management mechanisms. Research shows that the most promising educational interventions are those that encourage teachers to change their teaching pedagogy to match students' learning levels (Evans and Popova, 2015). Therefore, the project sought to track students' academic progress by implementing a national learning assessment system. The theory of change was that in addition to setting up a system for regular assessment of student learning, and annual collection of school administrative data through the rapid results survey, the information would be used to inform the education sector analysis - the basis for the education sector plan. For instance, data from the teacher management database based on a stock-taking of teacher information was incorporated into the education sector analysis. The idea is that together these practices and the information they provide would lead to a systematic strengthening of education planning and management in Sudan.



**15. The related PDO and IR indicators for outcome 3 are:**

PDO3: System for learning assessment at primary level

PDO 4: Timely annual production of data through EMIS supplementary tool

PDO 5: Full ESSP developed

IR: National learning assessment designed

IR: Development of teacher management system

**Components**

16. **Component 1: Improvement of the learning environment (US\$36.2 million).** The component's objective was to improve students' learning environment for children in targeted rural disadvantaged states. The project targeted school construction interventions towards rural communities within states with lower education outcomes relative to other states, particularly states with low GERs, low completion rates, and large numbers of out-of-school children and high poverty. The two main interventions were constructing and rehabilitating classrooms (sub-component 1.1) and launching a school grants program (sub-component 1.2) to reduce the burden of school costs on households and communities. The project targeted ten of the worst performing states for construction, including: North Kordofan, Sinnar, Northern, Gadarif, Red Sea, North Darfur, Blue Nile, Kassala, South Darfur, and East Darfur based on an aggregate score measuring education and poverty outcomes (i.e., GER, completion rate, proportion of population considered "rural", poverty incidence, probability of being out of school for ages 10-24). Those states represent more than half of the overall population in Sudan. Communities were targeted by states on a demand basis and based on the following eligibility criteria: (i) minimum population in the village; (ii) existence/absence of a school; (ii) gap between the number of school-age children and the number of children going to school; (iii) proportion of non-durable buildings in the school; and (iv) maximum student/classroom ratio. Priority was given to the most populous communities and schools, and schools that had existed the longest without durable construction.
17. School grants were to be made available rapidly to approximately 750 schools (150,000 students) within the same localities targeted by the classroom construction based on a simple school action plan. The targeting of schools required that at least half of the selected schools included girls (i.e., girls' schools and mixed schools). In addition, the National Learning Assessment (NLA) results were used to identify the weakest performing schools for the school grants program. Further, new selected localities were to include the most vulnerable schools which would receive additional capacity building and opportunities to receive school grants. The grants would focus on providing schools with funds for operational expenditures such as learning supplies, furniture and equipment and some recurrent costs such as water supply thereby reducing the burden on communities to pay for it out of their household funds. Table 1 presents the numbers of targeted student beneficiaries for classrooms and school grants by state compared to the population of basic students.

**Table 1. Number of targeted student beneficiaries by intervention, by state**

	State	# of students, total 2018	# of students in schools that received construction	as % of total	# of students in schools that received grants	as % of total	# of Classrooms constructed*
1	Blue Nile	126,195	7,658	6.1%	69,298	54.9%	112
2	Central	134,479	0	0.0%	48,083	35.8%	32



	Darfour						
3	East Darfour	129,521	12,003	9.3%	26,243	20.3%	118
4	Gadarif	320,432	10,231	3.2%	94,092	29.4%	148
5	Gezira	874,017	0	0.0%	75,389	8.6%	0
6	Kassala	246,096	6,736	2.7%	88,062	35.8%	122
7	Khartoum	1,096,134	0	0.0%	96,118	8.8%	0
8	North Darfour	424,743	10,979	2.6%	91,824	21.6%	206
9	North Kordofan	425,130	4,542	1.1%	146,778	34.5%	88
10	Northern	134,825	5,626	4.2%	68,009	50.4%	96
11	Red Sea	140,948	4,384	3.1%	79,811	56.6%	78
12	River Nile	226,389	0	0.0%	125,542	55.5%	34
13	Sinnar	282,663	8,072	2.9%	119,575	42.3%	96
14	South Darfour	440,182	26,771	6.1%	84,874	19.3%	272
15	South Kordofan	189,145	0	0.0%	57,037	30.2%	0
16	West Darfour	149,539	0	0.0%	72,730	48.6%	32
17	West Kordofan	279,094	6,570	2.4%	112,582	40.3%	122
18	White Nile	398,581	0	0.0%	0	0.0%	0
	Total	6,018,113	103,572	1.7%	1,456,047	24.2%	1,566

Source: BERP; \* As of time of ICR submission

- 18. Component 2: Increasing the availability of textbooks and learning materials (US\$25.8 million).** The component's objective was to improve the policy framework for textbook provision (sub-component 2.1) and production, procurement and distribution of textbooks, associated teachers' guides and other supplementary materials (sub-component 2.2). This included training teachers on the new content, how to use the materials and pedagogy. The scope of the textbook component was nationwide and therefore covered all grade 1-3 students. Textbooks and teachers' guides would be distributed to approximately 15,000 public schools across Sudan. The training for teachers on the use of textbooks and teachers' guides were targeted toward grade 1-3 basic education teachers.
- 19. Component 3: Strengthening the monitoring and management mechanisms of the education system (US\$14.5 million).** The component focused on developing and strengthening systems to deliver essential services (offered since the CPA) and to assist in the crucial initial stages of building MoGE's capacity to collect, analyze and use data for evidence-based planning. This included development and launch of the National Learning Assessment (NLA) (Sub-component 3.1); development and implementation of the Teacher Management and Monitoring System (Sub-component 3.2); operationalization of the Education Management Information System (EMIS) (Sub-component 3.3); development of the Education Sector Strategic Plan for 2012-2016 (Sub-component 3.4); Strengthening the capacity of the Ministry of Education and state ministries of education to implement, monitor and evaluate the project, including carrying out financial management, safeguards, procurement and audits of the project (Sub-component 3.5).



## **B. SIGNIFICANT CHANGES DURING IMPLEMENTATION**

### **Revised PDOs and Outcome Targets**

20. The PDO was not revised during the project period.

### **Revised PDO Indicators**

21. Only one of the PDO indicators in the Results Framework was substantively revised during the project lifecycle. The “Number of direct beneficiaries with access to textbooks” was changed to “Number of textbooks purchased and delivered to basic schools” in order to improve its measurability, validity and reliability. In addition, the PDO indicator “Full ESSP developed by 2013” was abbreviated to “Full ESSP developed” by removing the target date. Annex 7 presents the key project indicators and changes after each restructuring.

### **Revised Components**

22. The project components and scope were not revised.

### **Other Changes**

23. The project restructured at level 2 in January 2015, 2017, and 2018. The first restructuring in 2015 was solely to make changes to the results framework (indicators and increase targets). The second restructuring in 2017 extended the project by one year and reallocated funds from Component 2 (US\$8 million) to Component 1 for construction, to take advantage of efficiencies stemming from lower textbook unit costs and compensate for higher school construction unit costs and from Component 3 (US\$2.5 million) to Component 1 for school grants. Additional funds were used to double the number of communities receiving school grants. On the other hand, the number of classrooms to be constructed would be reduced significantly (from 2,000 to 1,200), even with the additional funds. The third restructuring in 2018 extended the project by one year and increased the targets for classroom construction to 1,600 in anticipation of the increased outputs due to savings based on a higher conversion rate of funds disbursed to the project account.

### **Rationale for Changes and Their Implication on the Original Theory of Change**

24. The project restructurings were designed to achieve the PDO in alignment with the original theory of change which remained consistent throughout the project life cycle. In 2015, the project restructured to improve the results framework (seen Annex 7). Two PDO and three IR indicators were revised to be more precise and two new IR indicators were added to establish a clear progression in the results chain. In 2017, the project reallocated US\$8 million from the savings on textbook procurement (under Component 2) to build approximately 250 classrooms (under Component 1). In addition, US\$2.5 million from Component 3 on project management was reallocated to scale up school grants under Component 1. Relevant indicator targets were revised to reflect these expectations. The restructuring also extended the project by one year to February 2018. In 2018, the project was again extended by one year to allow time for the government to complete an additional 480 classrooms using extra funds from the higher exchange rate conversion. The target for classroom construction was increased accordingly.



## II. OUTCOME

### A. RELEVANCE OF PDOs

#### Assessment of Relevance of PDOs and Rating

25. The PDO was appropriately targeted for the fragile country context and highly relevant to the country's sectoral needs. The project objectives and activities were fully aligned with the goals set out in the government's strategy of "Education for All" and the main pillar of the Sudan Interim Poverty Reduction Strategy (IPRSP), "to invest in human resources". Further, the project sought to provide urgent service delivery to improve access to and quality of education while simultaneously working on the foundation for improving the system for long-term sustainability, as laid out in the Interim Basic Education Strategy (iBES) 2012-14. The iBES served as the basis for the Education Sector Strategic Plan (ESSP 2012-16) which included enhancing the learning environment, classrooms and learning materials while also strengthening the federal and state ministries' capacities to monitor and manage the education system.
26. The project remains highly relevant for the World Bank's country and sector strategies. For instance, it addresses the socio-economic roots of conflict, one of the two main pillars in the Sudan Interim Strategy Note FY2014-15.<sup>4</sup> The project was identified as one of the activities under the focus area of "Equitable service delivery in education and health". The PDO also aligned with the World Bank Education Strategy 2020 (Learning for All-Investing in People's Knowledge and Skills to Promote Development). The project objectives continue to be critical to Sudan's current goals to improve quality learning and expand access to basic education, as set out in the Education Sector Strategic Plan (ESSP 2018-2022). They also contribute towards the Education sector goal as laid out in the Sustainable Development Goal 4 on education, Target 4.1 'By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.'
27. Based on this rationale, the overall rating for relevance is "high".

### B. ACHIEVEMENT OF PDOs (EFFICACY)

#### Assessment of Achievement of Each Objective/Outcome

28. The PDO had three outcomes: (1) improved learning environment in targeted areas; (2) increased availability of textbooks; and (3) strengthened education planning and management mechanisms. The PDO outcomes were measured by a combination of PDO indicators and intermediate results indicators. Annex 8 presents three tables illustrating the PDO outcomes and related key indicators alongside the project achievements toward each target throughout the project's life cycle.
29. **PDO 1: Improved learning environment in targeted areas.** PDO1 focuses on improvements in the learning environment achieved through newly built and rehabilitated classrooms with working latrines, water points and secure fencing furnished with essential items such as furniture, laboratory equipment

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<sup>4</sup> The Sudan Interim Strategy Note FY2014-15 is the most recent Bank country strategy document for Sudan.



and additional learning materials purchased by communities with school grant proceeds.

30. Achievement of PDO 1 is best captured in the results framework by the intermediate results (IR) indicators. Although the Project Paper associated the PDO indicator measuring direct project beneficiaries with component 1 on construction, the IR indicator measuring the number of beneficiaries with access to additional classrooms built at the primary level is more precise. It goes beyond assessing the classroom construction by capturing the number of children benefiting from it. The project achieved 149 percent of the final target by project closing i.e., 66,320 students with access to schools with new classrooms.<sup>5</sup>
31. The other relevant IR indicator is “the number of additional classrooms built at the primary level, resulting from project interventions”. A total of 1,226 classrooms were completed by project end, representing 77 percent of the final target of 1,600. However, it is important to note that since project closing, 340 additional classrooms were completed using government financing thereby demonstrating the government’s strong commitment. This brought the total of completed classrooms to 1,566 (98 percent of the final target), with the remaining under construction.
32. Construction had a slow start because of challenges in staffing the PIU, weak procurement, and lack of initial support and capacity to implement the community empowerment model (CEM) approach for construction. Therefore, most of the initial progress made in building classrooms in the beginning of the project was through the conventional modality (CM) approach. CEM was an innovative implementation mechanism by which delegates for the communities took full responsibility to implement school construction. This included: community-contracting for procurement of civil works through local competitive bidding, technical site supervision, and financial management of the contract costs. To address the low capacity, the project provided additional support to the PIU, clusters and communities in procurement and financial management agreements and improved training modules for the communities (see details under lessons learned). The CEM approach improved significantly after the initial learning curve and proved to be a highly effective approach that was not only implemented widely in education but also expanded to other sectors such as health.
33. The project restructured in 2017 and reduced the targets for the PDO and IR indicators accordingly. It also reallocated project savings from other components to construction and adjusted implementation processes to address the previous challenges. For instance, construction adhered to the lower cost design specifications and standard grade materials and discontinued the unsafe practice of rainwater harvesting. Also, MOF allocated budget to reimburse BERP for the value-added tax (VAT) charged on previous contracts and exempted the VAT for the third batch of CM contracts and all CEM contracts. Further, an improvement in the exchange rate enhanced the funds available to build more classrooms. This coupled with significant advances in the training of communities to manage school construction (N=300 representing 201 percent of target) helped to accelerate productivity to the point where the project anticipated an increase in additional classrooms. Therefore, the project revised the target upward in the 2018 restructuring. (Table 1 presents the construction of classrooms by state over the project duration.) The government was so committed that it continued to build schools with its funds after project closure, constructing almost all the planned schools.

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<sup>5</sup> It achieved 83 percent of the original target of 80,000 before the 2015 restructuring when only ten percent of funds were disbursed.



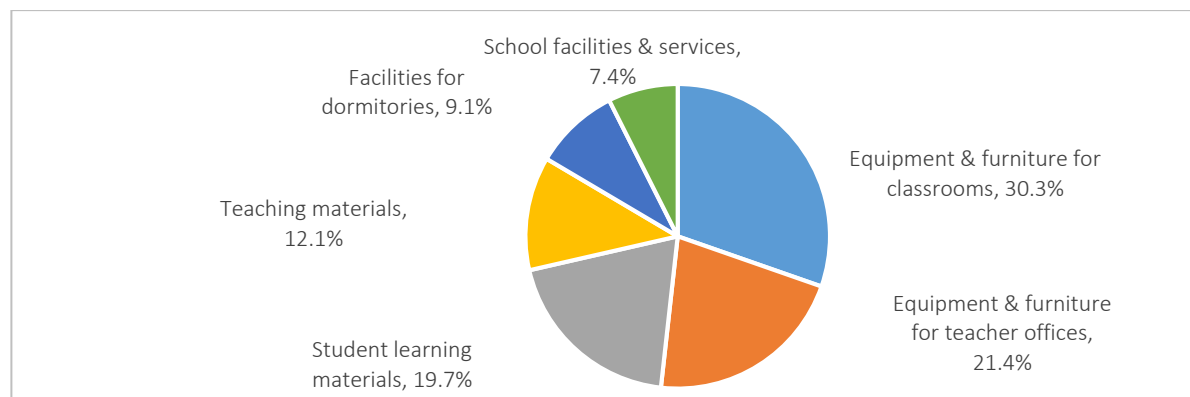
34. The school grant program was implemented in phases starting with pilots to be evaluated so lessons could be applied to the program for scaling up. Pilots were planned in the Kassala cluster (Gedarif, Kassala, and Red Sea states), Sinnar cluster (Sinnar, Blue Nile and North Kordofan states), the Northern state and the Darfur states. There were initial delays in the Sinnar cluster, Northern state and Darfur due to weak capacity. The program therefore utilized intermediary support providers (ISPs) until local capacity was strong enough to manage the school grants and FM systems without using the ISPs as an intermediary. The project (through the ISPs, with support from the PIU and Clusters) provided significant capacity building at the locality level in managing the school grants program and financial management to ensure communities would eventually be able take over by themselves. The pilots were successful in Kassala and Sinnar clusters and therefore the ISPs were deployed to other localities within states for scaling up the program. The pilot schools which did not succeed at first were given special consideration and priority over others for the second round as well as intensive training and capacity building to enhance their chances of success. By MTR, the pilot phase was successfully concluded in 19 localities with 633 schools and 138,500 students reached. The program was scaled up in 39 additional new localities with 2,892 schools and 1,495,487 students. This included 11 states targeted by classroom construction and five states with low performance according to the NLA (three localities in River Nile, three in White Nile, three in South Kordofan, two in Central Darfour and two in West Darfour). The school grant allocation was increased to fund the scale up of the school grants intervention.
35. The results for school grants were formidable. Six thousand three hundred and thirty-nine communities received school grants, representing 423 percent of the final target achieved.<sup>6</sup> Table 2 summarizes the localities and schools receiving school grants throughout the program phases. This allowed schools to purchase necessary items such as equipment, learning materials and furniture. Figure 2 presents how the school grants were utilized based on data collected from 4,116 schools. The most impressive outcome was that even after receiving the grants, the communities still contributed to the schools out of their personal funds demonstrating their strong commitment to education.
36. Contributing outputs achieved along this results chain included development of school grants program operation manuals and guidelines, and the pilot program being scaled up among additional communities which were achieved in a timely manner.

**Table 2. Localities and schools receiving school grants over project duration**

Program phase	Number of localities	Number of schools	Amount in SDG (million)
Pilot 2015	19	633	5.2
Scale up 2016	36	2,758	23.4
Scale up 2017	19	1,914	15.6
Remaining for 2018	9	10,349	12.1
Total	83	6,339	56.3

**Figure 2. School grant utilization**

<sup>6</sup> It achieved 845% of the original target of 750 before the 2017 restructuring.



Source: BERP

37. Overall, there were a total of 1.55 million project beneficiaries for Component 1. More than one hundred and three thousand students benefitted from classroom construction in 11 states. There were 1.46 million students benefitting from school grants in 17 states. (Table 1 presents the number of students benefiting from classrooms and school grants, by state.)
38. Based on the achievements described above, the rating for PDO 1 is “substantial.” (Annex 8 Table 1 presents the project achievements and the related targets throughout the project life cycle.)
39. **PDO 2: Increased availability of textbooks.** PDO 2 focuses on making textbooks available to basic school students across Sudan. Therefore, achievement of PDO 2 is measured by the PDO indicator measuring the total direct project beneficiaries. The indicator was operationalized as the number of students enrolled in primary schools and reported on accordingly thereby capturing all students benefiting from the national textbook program. By project end, there were 6,020,820 total project beneficiaries, representing 99 percent of the final target. The proportion of female beneficiaries was 48 percent thereby fully achieving the target (48 percent female).
40. **Achievement of this PDO was further measured by the PDO indicator measuring the number of textbooks purchased and delivered to basic schools.** The project faced some challenges early in the procurement process in the second batch of textbooks. The supplier failed to provide quality assurance testing prior to shipment of the first eight containers. When the textbooks were checked at the Port of laden not all books met the quality criteria for a triple binding (i.e., stapled, glued and sewn). The printing company had not allowed inspection of the books, as per the contractual agreement. Thus, the deviation from the specifications were not discovered until they reached Sudan. The company had to reimburse the project. Based on this experience, the project changed the procurement process moving forward and split the letter of guarantees for batches three and four so that payments were made by batch instead of all at once.
41. The project achieved 169 percent of the final target, delivering approximately 22 million textbooks by project closing. The project not only realized significant cost savings through efficient procurement of international printing services, but it also produced higher durability textbooks which could last for four years (versus only one year). Thus, the project proactively increased the target from nine million to 13 million (during the 2017 restructuring). The distribution process was enhanced by conducting publicity



campaigns in the daily news to sensitize parents about upcoming textbook deliveries and by physical monitoring of schools to ensure they received their textbooks. In addition, a paper trail was introduced to track the process at the various levels: state, locality, administrative unit, school. Table 3 presents the textbooks delivered and per unit cost by batch over the project duration.

**Table 3. Textbooks delivered, by batch over project duration**

Year	Textbook batch	Quantity (millions)	Unit cost USD	Contractor
2016	Batch 1: Math (4,5,6), Science (4,5), English (4)	4.5	.60	Pitambra
2017	Batch 2: Arabic (1,2); Math (1,2); Science (6,7); English (7)	5.1	.37	Hanoi
2017	Batch 3: Grade 3(Math, Arabic, Science & Geography)	2.9	.32	Pitambra
2018	Batch 4: Grade 4 (Student books with matching teachers' guides for Math, Arabic, Science, Geography, English); Grade 3 and 5 (new English textbooks, activity books, and atlas)	9.4	.50	Pitambra

42. The results chain also included two key intermediate results: “textbook policy adopted and implemented” and “revision and development of core subject textbooks”. Both were achieved. Textbook policy along with procurement and management strategies were developed in consultation with stakeholders on content, gender and conflict sensitivity and with technical assistance (TA) from an international consultant. The textbook policy was adopted in 2017. Textbooks and teachers’ guides were not only revised accordingly but in fact, the project exceeded the target for revision of core subject textbooks for grades 1 to 4 by revising grade 5 as well.
43. The related teacher training activities were also completed. Although not included in the results framework, the project monitored its Training of Trainers program in Math and Arabic for grades 1 to 3. This resulted in 66,000 grade 1 to 3 teachers trained. There were 36 master trainers (two per state) conducting Training of Trainers to 489 trainers from 189 localities (nation-wide) in primary schools. In other words, every school had two teachers in Math and Arabic attend the five-day training program led by master trainers at the locality level. The program provided training on the key features of the new curriculum and analysis of new textbooks (objectives, content and methodology). Further, it provided guidance on assessment of student learning and how to conduct practice assessments. It also taught pedagogy, group work, communication skills, and active teaching methodologies. The training also covered topics such as teaching students with special needs, culture of peace and human rights.
44. Overall, the component surpassed expectations and exceed targets, resulting in a rating of “high” for PDO 2. (Annex 8 Table 2 presents the project achievements and the related targets throughout the project life cycle.)
45. **PDO 3: Strengthened education planning and management mechanisms.** Achievement of this PDO was measured by three qualitative PDO indicators including: a system for learning assessment at primary level in place; timely annual production of data through the EMIS supplementary tool; and full Education Sector Strategic Plan (ESSP) 2018-2022 developed. These outcomes are important because they capture functions critical for evidence-based planning and management such as, the gathering and use of data to inform strategic targeting, budget allocations, teacher deployment, textbook distribution, and decisions about education policy more broadly.



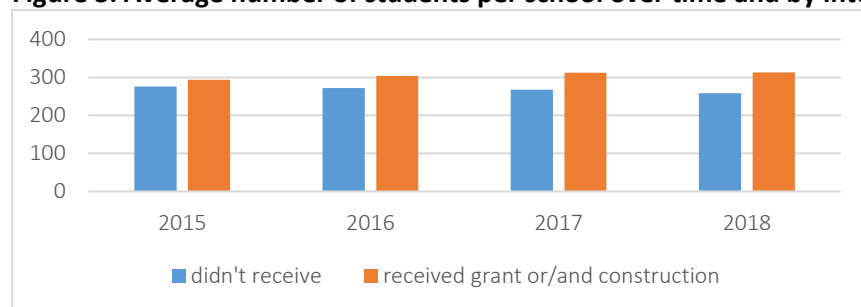
46. **A system for learning assessment is critical for guiding education policy and program planning** based on student performance. Student learning assessment data are critical for determining what programs are working, what areas need to be improved, and impact evaluations. Toward this end, the project administered the first nationally representative sample-based assessment of early grade learning in 2014/2015 school year among third graders. While a firm was hired to lead administration of the first NLA, the Government demonstrated a strong interest and enhanced capacity to play a much larger role in conducting the NLA in the future. The 2015 NLA report was disseminated and discussed with all states in 2016. Further, the results were used to inform school grant targeting.
47. In 2017/18, another NLA was conducted among third graders and extended to sixth graders. However, this time the Quality and Assessment Center of the Ministry of Education led the test administration. Based on the government's strong interest and capacity, the government will continue conducting national learning assessments. The process of test administration, data collection, analysis and application of test results has been institutionalized and therefore sustainable moving forward.
48. The successful completion of the 2017/18 NLA allowed a comparison of snapshots of reading and language comprehension among third graders at two points during the project. In addition, the 2018 NLA included additional information on competencies in math, science and language. The 2018 report was completed and presented to the Minister Council in 2019. The 2018 report findings will be used for future work in the education sector as well as in implementing the new GPE project.
49. **Systematic administration of the annual school census is essential for planning and management.** The project implemented an annual school census for the last four academic years using the Rapid School Survey tool to track the system's progress. The tool was successful, fast, accurate and inexpensive. Thus, it will be used moving forward to collect all necessary administrative data (e.g., school type, location, student enrolment by grade, teachers, qualifications, school facilities and infrastructure, availability of learning materials and funding contributed by communities) for education planning and management.
50. **A critical intermediate result was the development of a teacher database.** The database was completed in 2016 and comprised information on teacher demographics e.g., (age, gender) and qualifications such as years of experience, career grades and teaching assignment. The data were analyzed and findings on the distribution of teachers by school and state, the share of assignment by school, locality and state were reported in the teacher management chapter of the Education Sector Analysis.
51. **The successful development of the ESSP 2018-2022 is important** because it demonstrates the culmination of these planning and management capacities applied for a strategic evidenced-based plan for education in Sudan. In other words, the finalized ESSP required the government not only to collect, process and analyze the data but to synthesize the findings across resources and use it for program planning. The ESSP 2018-2022 and a costed multi-year implementation plan was finalized and approved in December 2018 by the Ministry of Education and the Council of Ministers including the commitment to finance it.
52. Overall, all the targets were met therefore justifying a rating of "substantial" for PDO 3. (Annex 8 Table 3 presents the project achievements and the related targets throughout the project life cycle.)



### Justification of Overall Efficacy Rating

53. **The PDO and IR indicators appropriately measure the PDO.** As discussed previously, given the fragile context of Sudan, the PDO was targeted realistically at an intermediate level. All the PDO and IR targets were met or exceeded except one IR target that was partially achieved by project end. In addition, the project demonstrated evidence of contributing to higher level outcomes.
54. The project data indicate an **increase in access to education over the project life cycle**. The project tracked the average number of pupils in schools (see Figure 3). There was an increase of 6.7 percent between 2015 (mean=294) and 2018 (mean=313) among BERP project schools compared to a decrease of 6.4 percent among schools in similar localities that did not receive additional BERP interventions such as school grants (2015 mean=276 and 2018 mean=259). The difference in difference between the two groups was statistically significant 13.1%,  $p < .01$ ).

**Figure 3. Average number of students per school over time and by intervention**



55. **The project also tracked student performance and found reductions in repetition rates and improvements in learning outcomes among project beneficiaries** based on the annual school census and NLA results. On average, students in grades 1-4 benefitting from additional BERP interventions (new classrooms and school grants) had significantly lower repetition rates (5 percent) in 2018 compared to rates in 2015 (7 percent) ( $p < .10$ ). Further, the project observed statistically significant improvements in grade 3 learning outcomes. Table 4 presents the NLA results comparing grade 3 students' reading levels in 2014 to 2018.<sup>7</sup> There was a five percent statistically significant ( $p < .05$ ) increase in the share of students who improved from level 1 ("emerging readers" with less than 30 words per minute) to level 2 ("established readers" with 31-60 words per minute). Table 5 also shows that the proportion of project students who could not read decreased by seven percent ( $p < .05$ ) over the course of the project. This is significant if we consider the context and illiteracy rates of pupils in comparable countries.

**Table 4. Changes in project beneficiaries' reading proficiency over the project life cycle**

Reading Proficiency Level	Definition	received construction and/or grants		
		2014/15	2017/18	Change over time (percentage points)
Below level 1	cannot read a single word	55.0%	47.6%	-7.4 pp*

<sup>7</sup> The analysis is based on grade 3 student results in project schools where the NLA was conducted in 2014/15 and 2017/18.

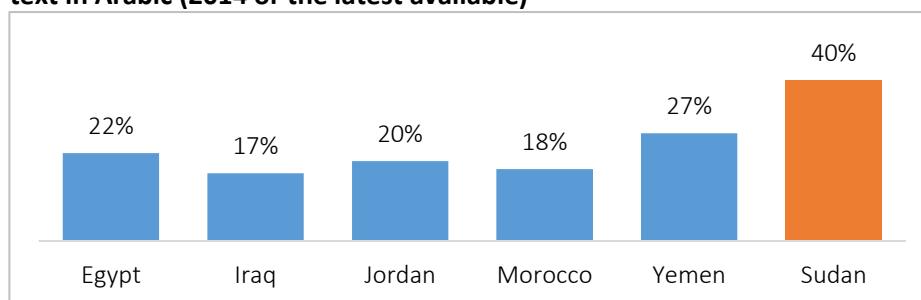


Level 1	reads 1-30 words per minutes	33.0%	35.0%	2.0 pp
Level 2	reads 31-60 words per minutes	11.1%	16.1%	5.0 pp*
N	No. students tested	460	460	

P<.05\*

56. Figure 4 presents Sudan (40 percent) and similar countries' rates of illiteracy in 2014. Yemen has the second highest rate of illiteracy among third graders with 27 percent. If the decrease of seven percent among BERP schools only (which included the lowest performers in Sudan) could be realized in the entire country, it would reduce the gap between Sudan and Yemen by half. While there would still be a long way to go, this analysis shows that the seven percent decrease in non-readers was statistically significant and therefore the increases in BERP schools were not observed by chance. Nationwide, the proportion of grade 3 non-readers was 38 percent in 2017, representing a two percent decrease for the country, as a whole ( $p < .01$ ). Thus, while the trend nationally was declining slightly, the magnitude was three times larger among project schools.

**Figure 4: Share of illiterate pupils; Percent of Grade 3 pupils who could not read a single word of a short text in Arabic (2014 or the latest available)**



Source: <http://www.earlygradereadingbarometer.org/>

57. Taken together, these analyses suggest preliminary support for the notion that students may be more likely not to repeat grades and achieve some progress in reading when they benefit from an improved learning environment. This includes: classrooms with walls (versus tents or outside gatherings), wash facilities (gender segregated latrines), basic furniture and equipment (i.e., desks, chairs, visual aids and labs); textbooks and learning materials with the new curriculum; and teachers trained on the new content of the textbooks and how to use them and apply active learning pedagogies. A randomized experiment would be necessary to provide clear scientific evidence of attribution of learning improvements to the project.
58. **The overall project efficacy is rated “substantial”** as all but one of the PDO and key IR targets were achieved or exceeded. Further, there is evidence that the project went beyond the PDO and increased access to education for students benefitting from the BERP interventions (construction and school grants).

## C. EFFICIENCY

### Assessment of Efficiency and Rating



59. BERP was implemented in a tremendously challenging context of economic instability, insecurity and conflict and low management capacity. The project was extended twice to complete construction. This was due to early delays in PIU staffing, weak procurement capacity and ownership of the community empowerment (CEM) approach which proved to be highly successful and cost-effective after the initial learning curve. The project addressed the challenges by providing additional support to the PIU, clusters and communities in procurement, financial agreements and improved training modules. While construction costs were higher than expected, the project met the gap by reallocating funds from the tremendous savings on textbook production and distribution. Overall, there were system-wide improvements in Sudan's education system's internal efficiencies in reduced repetition and dropouts. Further, Sudan's Human Capital Index (HCI) improved due to increased years of learning-adjusted years of schooling to which BERP contributed through improving the learning environment (building and rehabilitating classrooms), providing textbooks nationwide and training teachers on their utilization and strengthening the planning and management mechanisms of the education system. The returns to another year of schooling by world region are highest in Sub-Saharan Africa (12.4 percent), significantly above the global average (9.7 percent) (Montenegro and Patrinos 2014).
60. **BERP faced unpredictable economic challenges which drove construction costs up during project implementation.** Construction costs were higher than originally estimated primarily due to: high levels of inflation<sup>8</sup> and deterioration of the national currency's foreign exchange rate, vast growing disconnect between the formal and informal exchange rates, and unexpected VAT charges to project contracts. In addition, the client made architectural adjustments in the construction design which slightly increased costs e.g., larger size classrooms (to allow for adaptive learning and multi-grade classrooms) and improved ceilings for better ventilation. Also, the original standard drawings were not strictly followed. More expensive roofing materials such as Jack-Arch were used instead of metal sheets. In addition, rain water harvesting was used to provide drinking water in schools, which was also not part of the original designs. While the design changes added slightly to the costs, the main issue causing the jump in costs was the exchange rate and VAT charges. In fact, the unit cost of an equivalent classroom in 2015 with architectural adjustments was only four percent higher than estimated in 2011, based on the informal exchange rate of SDG into USD (10:1) versus the official exchange rate (6:1).<sup>9,10</sup> This demonstrates that the bulk of cost increases were due to external factors outside the project's control. Moving forward after the 2017 restructuring, the project adhered to the lower cost design specifications, standard grade materials, and discontinued the rainwater harvesting. MoFEP reimbursed BERP for the VAT charges and exempted future contracts. In addition, the exchange rate improved making additional funds available to build classrooms. For this reason, the government increased the target for school construction in 2018 to reflect the additional classrooms to be built with the exchange rate savings. Within six months of closing, a total of 1,566 classrooms have been completed, representing 98 percent of the target.
61. **BERP discovered cost-effective approaches for textbook production which increased quality and significantly decreased costs.** BERP produced and disseminated textbooks that were superior in terms of physical and editorial quality than previously produced in Sudan. The books had stronger bindings and

<sup>8</sup> Inflation rates on domestic prices increased yearly in Sudan between 2011 and 2015 (2011: 22.1%, 2012: 37.4%, 2013: 30%, 2014: 36.9%).

<sup>9</sup> As a point of comparison, the official and informal exchange rate were the same in 2011, 2.8.

<sup>10</sup> Using the parallel market exchange rate (10 SDG/US\$), the actual unit cost of US\$ 17,981 was only 4 percent higher than the unit cost after architectural adjustment (US\$17,236). This compares favorably with UNICEF's costs of US\$ 25,000 per unit.



durability thereby quadrupling the life span of books from one year to four years. In addition, there were significant cost-savings from outsourcing textbook production internationally. Books yielded an average unit price of US\$0.58, delivered at each state capital, compared to the original estimate of US\$1.8. Taking these factors into account, BERP procurement rules led to twelve times the value for the money, i.e. as the total cost is only one third the original estimate, and it will last four times longer.

62. **BERP observed improved internal efficiencies in Sudan's education system. There were significant improvements in repetition, and dropout rates** between 2015 and 2019 with even more pronounced increases in targeted grades (1 to 4). Overall, repetition rates decreased from 5.6 percent in 2015 to 4.6 percent in 2018 ( $p < 0.01$ ). In lower grades (Grades 1-4) repetition rates decreased from 5.9 percent in 2015 to 4.7 percent ( $p < 0.01$ ) in 2018. Dropout rates were stagnant at approximately 10 percent indicating that one out of every ten children leave the system at each grade of basic education in Sudan. In schools that received school grants and new classrooms, repetition rates decreased from 6.8 percent in 2015 to 5.6 percent in 2018 ( $p < 0.01$ ). Repetition rates in lower primary grades (Grades 1-4) decreased from 7.3 percent to 5.8 percent in 2015-2018 ( $p < 0.01$ ). Dropout rates in those schools decreased from 10.8 percent in 2015 to 10.2 percent in 2018 ( $p < 0.01$ ) (from 8.5 to 6.3 percent in lower primary [ $p < 0.01$ ]).
63. **BERP contributed to higher student retention in target schools.** Decreases in repetition rates resulted in higher promotion rates in public schools, which on average increased by 1.1 percentage points (see Annex 4 for details). Again, improvements in promotion rates were especially pronounced in lower grades, which benefited the most from the BERP interventions: in grade 2, by 3.1 percent ( $p < 0.01$ ), in grade 3, by 2.2 percent ( $p < 0.01$ ), and in grade 4 by 2.6 percent ( $p < 0.01$ ).
64. **Inefficient public spending in Sudan decreased** from SDG 360.5 million in 2015 to SDG 345.9 million in 2018, representing a 4.1 percent drop.<sup>11</sup> This translates into a decrease in inefficient government spending of SDG 31.8 million (USD 5.3 million in 2015 prices<sup>12</sup>). As a share of total public spending in basic education, inefficient spending decreased from 14.1 percent in 2015 to 13.0 percent in 2018 (See Annex 4 for details).
65. **In addition, within the duration of the BERP between 2015 and 2018, Sudan's Human Capital Index (HCI) improved along with the learning adjusted years.** The HCI measures the impact of underinvesting in human capital on the productivity of the next generation of workers. It is defined as the amount of human capital that a child born today can expect to achieve in view of the risks of poor health and poor education currently prevailing in the country where that child lives. A comparison of HCI indexes among developing countries show that Sudan is underinvesting in the future productivity of its citizens. It is ranked in the lowest quartile of the HCI distribution, with an index slightly lower than the average for the Sub-Saharan Africa (SSA) region. Specifically, a child born in Sudan today will be only 38 percent "as productive when she grows up as she could be if she enjoyed complete education and full health".<sup>13</sup> This is partially due to the low levels of learning achievement in Sudan. A child born in Sudan today is expected to complete only 7.3 years of education by age 18. Because of the low levels of learning achievement in Sudan, this is equivalent to 4.4 (learning-adjusted) years.

<sup>11</sup> Inefficient spending is defined as public spending on repeaters and students that drop-out from the school system before completing the education cycle. We use per-student spending to estimate the total amount of inefficient spending.

<sup>12</sup> 1 USD = 6.0 SDG in 2015.

<sup>13</sup> The official definition of HCI.



66. Due to improvements in the education component of the index, Sudan's HCI increased from 0.38 in 2015 to 0.39 in 2018. Learning-adjusted years of schooling increased from 4.4 in 2015 to 4.8 in 2018 due to increased access to education. Based on the empirical literature, an additional year of school raises earnings by about 8 percent (Montenegro and Patrinos 2014).<sup>14</sup> Thus, the increase in the learning-adjusted years of schooling in Sudan represents a 3.6 percent increase in labor productivity.
67. Thus, the rating for efficiency is "substantial" based on the analyses presented above and in Annex 4 including: significant efficiencies in implementation of textbooks from which cost savings were used to compensate for the construction cost increases due to external factors; and internal efficiencies in the education system from reduced repetitions and dropouts.

#### D. JUSTIFICATION OF OVERALL OUTCOME RATING

68. **The overall outcome is satisfactory based on high relevance, substantial efficacy and substantial efficiency.** One of the outcome targets for PDO 1 was revised downwards during the 2017 restructuring and therefore required a split rating. Table 5 presents the calculations for the overall outcome rating.

**Table 5. Overall outcome rating**

Rating dimension	Original objectives (before 2015 restructuring)	Objectives after 2015 restructuring and before 2017 restructuring	Objectives after 2017 restructuring and before 2018 restructuring	Objectives after 2018 restructuring and before project closing
<b>Relevance of objectives</b>	<b>High</b>			
<b>Efficacy</b>				
PDO 1: Improving the learning environment	Modest	Substantial	High	Substantial
PDO 2: Increasing the availability of textbooks	High	High	High	High
PDO 3: Strengthening the monitoring and management mechanisms of the education system	Substantial	Substantial	Substantial	Substantial
<b>Overall Efficacy</b>	<b>Substantial</b>	<b>Substantial</b>	<b>High</b>	<b>Substantial</b>
<b>Efficiency</b>	<b>Substantial</b>			
<b>Outcome rating</b>	<b>Satisfactory</b>	<b>Satisfactory</b>	<b>Highly Satisfactory</b>	<b>Satisfactory</b>
Outcome rating value	5	5	6	5

<sup>14</sup> Montenegro, Claudio and Harry Patrinos (2014). "Comparable Estimates of Returns to Schooling Around the World". World Bank Policy Research Working Paper No. 7020.



Amount disbursed (\$US millions)	7.76	50.11	69.04	75.92
Disbursement (%)	10	55	25	9
Weight value	.5	2.75	1.5	.45
Total weights	5.2			
<b>Overall outcome rating</b>	<b>Satisfactory</b>			

## E. OTHER OUTCOMES AND IMPACTS

### Gender

69. A key focus under BERP was improving the learning environment for girls. Component one targeted girls' schools for construction and rehabilitation of classrooms and school grants. Key challenges to getting out of school girls to attend is reducing the distance of their commute. Thus, BERP focused on construction in remote rural areas. In addition, all schools were built with gender segregated latrines and secure fences. These specifications were designed to provide a safe environment for girls and encourage families to send them to school.
70. Likewise, the school grants program specifically targeted girls' schools in selecting and preparing recipients for the school grants program. The criteria prioritized schools that girls attended and provided additional capacity building and opportunities to receive the school grant. Within each new selected locality, the selection of schools per round ensured that half of selected schools were girls' schools or mixed schools and that the most vulnerable schools received additional capacity building and opportunities for school grants. In the end, 78 percent of interventions schools were either mixed or girls' schools. The average number of girls enrolled in schools that received the school grant increased by 3.3 percent over the lifespan of the project (140 in 2015 to 144 in 2018) compared to a decrease of 8.6 percent in schools that did not receive grants (129 in 2015 to 118 in 2018) ( $P \leq .01$ ).

### Institutional Strengthening

71. The project strengthened the government's administrative data systems by helping put in place processes to systematically enhance planning and management while building capacity of the MoGE, state ministries, PIU staff and local communities. The project developed a cost-effective and efficient system for conducting the annual census through rapid surveys using tablets. It built local capacity for data collection, compilation, analysis and reporting. It was so effective that the methodology replaced what was originally envisioned under the planned EMIS. In addition, the national learning assessments were institutionalized with two nationally representative tests successfully conducted under the project. Most importantly, the systems are now in place for continued testing in the future. Indeed, the ACS and NLA data have already been used to inform evidence-based planning and decision making through the development of the education sector strategy plan and policies for teacher deployment and school grant allocations. Through training, on the job learning, and technical assistance in project implementation, the skills and capacity of communities, school administrative staff, faculty and government employees at all levels were enhanced in financial management, procurement, textbook distribution, monitoring and evaluation, school construction and grant management. The new GPE project will build on the institutions strengthened under BERP and support the recovery and stabilization of basic education sector in Sudan.



## Mobilizing Private Sector Financing

72. Not applicable

## Poverty Reduction and Shared Prosperity

73. BERP focused on poor vulnerable children from lagging rural areas including IDPs and nomads. Interventions were concentrated in areas with high numbers of out of school children and drop-out rates and poor-quality schools lacking financial resources. The project targeted school construction interventions in rural communities in states that had the lowest educational outcomes as measured by the first NLA in 2014/15, GERs, completion rates, and the largest numbers of out of school children. Thus, 78 percent of construction activities were in rural states. Likewise, the school grants program targeted schools in low income communities, in line with the iBES's goal to reduce the burden of education costs on households incurred through parental contributions, uniforms and other direct costs. Capacity building efforts focused on weaker schools (i.e. those that would not typically win the competitive process) to ensure that the most disadvantaged could benefit from the project.
74. A comparison of rural students enrolled in BERP intervention schools versus other schools in similar localities showed that enrollments increased in project schools on average by 7.3 percent compared to 0.6 percent in non-project schools ( $p < 0.01$ ) over the project life cycle. This increase was also observed in urban areas, but the magnitude of the increase was smaller. In urban areas, enrollment in the BERP intervention schools increased by 2.5 percent, compared to other schools where enrollments decreased by 14.1 percent ( $p < 0.05$ ). Table 6 presents the average number of students enrolled in rural and urban schools over time and the difference between project and non-project schools.

**Table 6. Average number of pupils enrolled in rural and urban schools over project cycle**

Location	Intervention	2015	2016	2017	2018	% change	Diff in diff
Rural	received grant and/or construction	249	262	266	267	7.3%	6.7**
	didn't receive	225	230	225	226	0.6%	
Urban	received grant and/or construction	450	459	472	461	2.5%	16.6*
	didn't receive	344	326	315	295	-14.1%	

$p < 0.05^*$ ,  $p < 0.01^{**}$

75. The project's theory of change dictates that children benefiting from the improved learning environment in BERP schools will achieve better learning outcomes. This in turn would contribute to higher incomes and better livelihoods in the long-term.



## Other Unintended Outcomes and Impacts

76. **Expansion of Community Empowerment Approach beyond BERP.** The project built the capacity of local communities sufficiently enough that they were able to implement the procurement and management of construction of their classrooms and schools. The approach was found so successful that CEM was applied in non-project localities and sectors. Specifically, the CEM approach was used to build classrooms and schools in Aldaba and Almafaza. In addition, the CEM approach was used to construct a health center in Jabrat Alshikh. The expansion of CEM was not an intended result of the project but speaks to the sustainability of the approach, which will be used in the new GPE project.
77. **BERP encouraged small size local contractors to bid on contracts thereby allowing them to gain the necessary experience to graduate to medium size enterprises.** Specifically, eleven contractors graduated from small to medium size enterprises in Northern State, East Darfur, Blue Nile, North Kordofan, North Darfur, Red Sea and South Darfur. Building the capacity of local contracting businesses was not an intended outcome of the project but thanks to the project encouraging their participation in the bidding process they were able to grow their businesses.

## III. KEY FACTORS THAT AFFECTED IMPLEMENTATION AND OUTCOME

### A. KEY FACTORS DURING PREPARATION

78. **National education strategies.** A main factor during project preparation was the Government of Sudan's (GoS) education strategy given the existing country context. BERP was appropriately designed to align with the GoS's commitments to Education for All (EFA) and investing in human resources, a key pillar in the 2011 Interim Poverty Reduction Strategy (iPRSP). More specifically, it addressed the urgent objectives of the 2012-14 Interim Basic Education Strategy (iBES): improving access to and quality of education alongside strengthening of the education system for long-term sustainability of the sector.
79. **Lending instrument.** The Bank appropriately applied the OP/BP 8.0 guiding principles for rapid response to crises in preparation of this operation to support the GoS in addressing the most critical immediate and medium-term pressures on the basic education system. This would help to mediate the externalities associated with the fiscal shocks Sudan was facing and deliver financial resources for service delivery quickly in the context of short-term austerity measures.
80. **Use of GPE funding.** Sudan was ineligible for World Bank financing at the time of project preparation and therefore applied to GPE to fund its project for basic education recovery. Thus, the World Bank agreed to serve as the supervising entity for the GPE project. This made sense given the World Bank's long-standing involvement in Sudan's education sector including the provision of technical expertise since 2009. Further, the Bank supported the analytical work for the ESR which informed the iBES, the mandatory pre-requisite for GPE funding.
81. **Stakeholder collaboration.** Due to the GPE funds, BERP preparation required close collaboration with the Government's designated task team, and consultation with the Local Education Sector Group (led by MoGE and comprised of representatives from the ministry, donor partners, international partners, civil society and



non-governmental organizations (NGOs), coordinated by the United Nations Children's Fund (UNICEF).

82. **Results framework.** BERP designed a results framework with appropriately realistic objectives in alignment with national strategies. Because of the emergency crisis context during which the project was designed, the PDO focused on the most fundamental outputs and intermediate outcomes necessary for laying the groundwork for future achievement of higher-level outcomes of improved access and student learning. The results framework included indicators appropriate for measuring the modestly targeted PDO outcomes, as recommended for projects prepared under OP 8.0 guidelines. However, the project M&E system did capture additional data above and beyond the PAD RF including data on higher level outcomes (as described in the section on M&E quality).
83. **Evidence-based design.** The fundamental project design was based firmly on evidence in the literature as cited in the theory of change section and based on experience in other projects in Sudan and similar projects in other countries. Further, the project was designed to roll out in phases in order to allow the project to learn from piloting activities on a small scale thereby creating multiple M&E loops from which adjustments were made to implementation based on the evaluation of pilots and lessons learned.
84. **Beneficiary targeting.** Given the national priorities, country context, and PDO, the project appropriately targeted the most disadvantaged children from rural areas with a focus on girls and vulnerable groups such as IDPs and nomads. The project's methodology for targeting beneficiaries for specific project interventions was empirically based on data collected from a variety of sources in the Government's M&E system such as the NLA results, rapid surveys and annual school census.
85. **Adequate implementation arrangements.** Implementation arrangements were designed to build on the existing systems already in place to be able to take swift action given the emergency recovery nature of the project. High performing FMOGE focal staff were identified to work with the PIU to create the BERP project team. The Government sought to build project management capacity across the system by creating a cross-donors PIU for all donor-funded projects. The idea was that, through exposure to international models of good practice, staff would "learn by doing". Overall, staff capacity was deemed weak in terms of strategic and financial planning by various reviews of states and localities. The project therefore planned to have the PIU and three Cluster Support Units provide close supervision of project implementation. It also designed the project to include training at federal and state levels to enhance project management and implementation skills while also building a sense of project ownership. Finally, the project included plans to recruit international expertise to provide technical assistance in financial management and support in procurement.
86. **Monitoring arrangements.** An appropriate plan was designed for monitoring of project outputs throughout the duration of the project. The project plans included recruitment of an independent monitoring agent to conduct random spot checks to physically verify service delivery, project outputs and their quality.
87. **Appropriate identification of risk and mitigation measures.** The project appropriately assigned a risk rating of "high" based on Sudan's on-going conflict areas, political and fiduciary risks. First, the project built on existing systems and thereby leveraged institutional knowledge about project management and WB procedures among PIU staff. In addition, the project identified various mitigation measures including: the provision of substantial capacity building efforts in managing construction, procurement, financial



procedures and M&E to the PIU, ministerial directorate staff, state officials and communities, all of whom would receive training. The PIU would also recruit staff with social and environment oversight capacity and seek technical support from Bank specialists on relevant issues as needed. Project plans also included technical assistance from international consultant in the PIU's technical support unit. In areas where the local capacity was deemed too weak to manage implementation, the project used alternate approaches (conventional procurement methods for construction, independent intermediary for school grants) until communities reached sufficient levels of capacity for them to take over. Further, the project design included integration of a rapid results survey tool to ensure the PIU would have the necessary data to effectively monitor implementation.

## **B. KEY FACTORS DURING IMPLEMENTATION**

88. **Unrest and insecurity in Sudan.** There were escalating violence and protests in Khartoum due to the increases in fuel prices. Likewise, conflict in Darfur continued since project effectiveness, posing potential risks for school construction and school grants. This led to delays in receiving visa approvals for travel to Sudan by World Bank staff and international consultants thereby delaying missions, on-site supervision and provision of TA.
89. **Government capacity and delays in recruitment of state cluster support units.** Although the World Bank provided substantial procurement and planning support to the PIU on recruitment, challenges in the recruitment process led to delays in implementation and procurement – particularly affecting the community-based school construction and school grants. This was also due to low capacity and ownership in the early stages of the project.
90. **Local currency rate changes.** The devaluation of the Sudanese currency from 2.4 SDG to 1 USD during project preparation in 2011/2012 to 4.42 SDG to 1 USD in 2014 led to a dramatic increase in construction costs from initial estimates i.e., more than four times higher in SDG and 2.15 times higher in USD. Further, there was a growing gap between the formal and informal exchange rates where the latter was 6.5 SDG to 1 USD.
91. **Unexpected application of VAT charges to contracts.** The addition of VAT applied to all GPE-financed BERP construction contracts signed before MTR added an extra 17 percent to contract costs. The project costs were estimated in USD excluding taxes. There was a total of US\$1.8 million VAT charged against project contracts which were not anticipated in the original project costs. The Government agreed to reimburse the project accounts for the VAT.
92. **Sanctions against the Bank of Sudan.** International sanctions imposed on the Bank of Sudan in December 2015 had dire consequences for the Sudanese economy and caused delays in the project. It created parallel markets with vastly different exchange rates for the official and unofficial markets. The World Bank offered a commonly used solution of writing contracts in USD which worked successfully in other countries. Unfortunately, MoF refused to write contracts in USD.
93. By prohibiting the Bank of Sudan from being a service provide for the World Bank, the sanctions led to severe cash flow shortages and delayed issuance letters of credit. This delayed payments to contractors by nine months which led to claims made against the project. Overall, the sanctions severely delayed the



project in the beginning. It slowed the production of the first batch of textbooks and construction. Eventually, the role was taken over by the Bank of Khartoum in June 2016 which allowed the project to move forward.

94. **Stakeholder engagement.** Community ownership increased over the project duration through the community workshops held for PTAs, construction management and school grant administration as well as the awareness raising campaigns on textbooks. Growing community ownership enhanced effective project implementation and led to even more support for schools. For instance, parents in communities that benefited from school grants still contributed out of pocket to children's schools.

#### IV. BANK PERFORMANCE, COMPLIANCE ISSUES, AND RISK TO DEVELOPMENT OUTCOME

##### A. QUALITY OF MONITORING AND EVALUATION (M&E)

###### M&E Design

95. **The M&E design was straightforward and aligned with expectations for emergency projects.** The results framework adequately measured the outcomes as they were articulated with related intermediate results indicators as dictated from clear results chains for each outcome. As noted previously, the PDO was appropriately modestly targeted.
96. Having said that, **the project went above and beyond the RF in the Project Paper by collecting additional data on outcomes** and intermediate results through developing **and implementing additional systems of data collection and monitoring**. The project administered four annual censuses and two nationally representative learning assessments which provided a wealth of data on learning outcomes, student achievement and administrative information. Thus, although not included in the RF, the Government's M&E system collected data on a variety of outcome data such as student enrolments, retention, repetitions, and test scores in math, science and reading. It also collected data on teachers. As described below, these data played a critical role in informing project implementation and the formation of education strategies and policies. Further, it allowed the project to demonstrate outcomes beyond the PDO in terms of improvements in access and learning.

###### M&E Implementation

97. **The project successfully implemented its M&E system** including regular updating of the results framework and monitoring reports in the Implementation Status and Results Reports (ISR). The PIU hired a senior M&E specialist in November 2014 to play a key role in developing an M&E plan and arrangements for regular monitoring, data collection and reporting to track activity progress for the project M&E system including the project results framework.
98. **The project was proactive in keeping the RF and indicator targets updated** including the first restructuring in 2015 which was solely to improve the RF. Two PDO indicators were revised. One was refined by changing the wording of the target from "ESSP "finalized" to "developed" and the other was revised to improve reliability and validity i.e., "beneficiaries with access to textbooks" - which was difficult to observe and measure- was replaced with "textbooks delivered". Three IR indicators were revised to be more precise and three were dropped to avoid redundancy with existing indicators. In addition, two new IR indicators were added for better monitoring of the results chain.



99. In 2017, the project revised the results framework again during restructuring. The project was proactive in updating the relevant indicator targets to reflect the new project expectations including an increase in textbooks (9 million to 13 million) and school grants (750 to 1,500), and a decrease in construction targets such as project beneficiaries with access to additional classrooms (80,000 to 44,480), classrooms built (2,000 to 1,112) and communities receiving school construction training (500 to 149).
100. In 2018, the project revised the RF during restructuring to extend the project by one year. The project increased the targets for classroom construction (1,112 to 1,600) to account for the anticipated progress in the additional year and extra funds stemming from the higher exchange rate.

### M&E Utilization

101. **The project M&E system was routinely used throughout the project life cycle.** The project regularly reviewed the M&E data to track whether the project was progressing as needed and to adapt project activities. For example, the 2017 project restructuring was initiated to address the low outputs for school construction and the positive results for school grants and textbook production. Based on the monitoring results for project outcomes and key IRs, the project ramped up its efforts in the areas that showed positive results (school grants) and reallocated the funding saved from cost efficiencies in other component activities (textbook production).
102. **M&E was used to inform specifically how these activities would be adjusted.** For instance, a thorough M&E exercise was conducted of the lessons learned in the early distribution of textbooks. The findings were used to correct flaws in the system and to scale up successful innovations from local initiatives in subsequent batches. Likewise, an evaluation was conducted of the pilot school grants program to inform how the program should be scaled up. Further, the NLA data were used to guide identification of schools for the school grant program (focusing on the poor performers). Indeed, the national learning assessments were a major input into the M&E system providing learning outcome information to guide policies and program implementation.
103. **The project also launched and institutionalized the rapid survey data collection methodology that was faster and more accurate than the EMIS.** The rapid survey information provided critical information for the project M&E system and will continue to do so for education M&E system at all levels moving forward. The data were essential for identifying school sites for construction, candidates for the school grants program and textbook distribution. Similarly, the development of the teacher management database was another important input into the M&E system. Information from the teacher database was used to prioritize the areas most in need for in-service and pre-service training and for policy and strategies at the locality, state and federal levels.

### Justification of Overall Rating of Quality of M&E

104. **Based on the above, the overall rating for M&E is substantial.** These are remarkable achievements for an emergency project in a fragile situation. BERP laid the groundwork for a fully functioning M&E system through M&E capacity building and the development of on-going data collection and databases, national testing of student performance and the use and application of this information for evidence-based decision making and policies – the continuation of which will be supported in the new GPE project.



## **B. ENVIRONMENTAL, SOCIAL, AND FIDUCIARY COMPLIANCE**

105. **Fiduciary compliance.** Financial management was challenging in the beginning of the project due largely to weak capacity. Towards this end, the project designed the project with a “Skills Transfer Strategy”. While this was eventually effective, weak capacity resulted in delays early on in submission of the first Interim Financial Report (IFR) (which was returned due to errors and issues), annual work plan and training program. In the first year of the project, it operated without an approved 2013 budget and the 2014 budget was not authorized on time. There were also delays in implementing the computerized accounting system and the audit plan with the national audit chamber. However, by early 2015 the project FM had improved and was rated MS consistently throughout 2017, at which time an FM review was conducted confirming the project progress in FM. The review found that the FM system provided reasonable assurance that the World Bank proceeds were used for the intended purposes and that the project was performing budget monitoring on grant funds, counterpart funds and the incentive funds accumulating from the sale of foreign currency. By mid-June 2017, the FM system was rated as satisfactory for the remainder of the project without any overdue reports or issues since June 2016. IFRs, audit reports and withdrawal applications were submitted on time. Inclusion of government seconded accountants in the finance department and the assignment of a resident Internal Auditor to the project by the Internal Audit Chamber provided extra controls on the project funds and strengthened the internal control system.
106. Areas for improvement include the Financial Management Information System (FMIS) used during the project which was inefficient and suffered from shortcomings related to the chart of accounts backlog, difficulties in translating multiple currencies, problems with inputting and uploading data, user-unfriendly queries and templates for reporting. Replacing it with an off the shelf FMIS should improve efficiency, effectiveness and reliable reporting.
107. **Procurement.** Procurement was carried out according to the World Bank’s Guidelines for Procurement under IBRD and IDA Credits. This included successfully carrying out International Competitive Bidding, National Competitive Bidding and simplified procurement methods for local competitive bidding and community contracting (for CEM construction and school grants). There was one issue early on with the procurement of textbooks from Hanoi Printing Company because they refused to allow the local inspection company to inspect the textbooks before shipping. After the arrival of the shipments, the project found discrepancies in some items for which it accordingly applied the penalties, as per the contract agreement. This was an unfortunate incident which attracted some negative press attention. However, it helped the project to self-correct and implement split payment methods so that procurement ran smoothly moving forward (see details in lessons learned section). The World Bank procurement team carried out annual Procurement Post Reviews to ensure that all procurement activities are in line with the World Bank Guidelines. Procurement was rated satisfactory in all ISRs with one exception of MS in November 2014.
108. Recommendations for the Government include developing a clear procurement and action plan which is reviewed and updated regularly by senior procurement officials to produce reliable cash forecasts. Likewise, MoF should develop one financial procurement manual to be applied to all projects to improve financial management efficiency. The Government will continue the “Skills Transfer Strategy” to build financial and procurement capacity in the ministry. The consultants hired to provide technical assistance



and build staff capacity in FM and procurement documented their institutional knowledge for future reference for the Government to be able to implement the strategy after the project ended.

109. **Environmental and Social.** BERP was a “Category B” project per Environmental Assessment (OP/BP 4.01) guidance, with Physical Cultural Resources (OP/BP 4.11), and Involuntary Resettlement (OP/BP 4.12) also applicable. As BERP was processed as an emergency intervention, an Environmental and Social Screening and Assessment Framework (ESSAF), required under OP 8.00, was prepared and included as an annex to the Emergency Project Paper. Quality of entry with respect to environmental and social safeguards was excellent due to the appropriateness of technical design guidance to the project staff and the selected communities. Quality of supervision with respect to environmental safeguards dipped a bit during implementation due to inconsistent monitoring and reporting by the Client, as well as spotty supervision reporting from the World Bank team. As BERP approached closure, and preparation of the follow-up project progresses, there has been closer attention to safeguards issues. On-the-ground environmental and social impact has been minimal. School upgraded latrine facilities for boys and girls, increased access to drinking water and handwashing facilities, and landscaping, resulting in net positive environmental benefits.
110. BERP took into consideration the broader social development issues through a focused inclusive education approach accommodating diverse sets of disabilities, learning differences, conflict sensitivity screening, cultural appropriateness in boys and girls mixed and separate schools. Classrooms were mostly constructed in existing school foot prints and therefore there was no land acquisition. The school designs continuously improved alignment with varying ecological and cultural needs and lessons learned from early school construction. Further, BERP undertook several community consultations and considered various concerns that were brought forward. It will be important to systematically record and document grievances to be considered in the follow up projects. Environmental and social safeguards were rated “H” throughout the project.

## **C. WORLD BANK PERFORMANCE**

### **Quality at Entry**

111. At the time of appraisal, the team ensured the project design was aligned with the Government of Sudan’s (GoS) commitment to Education for All (EFA) and the priorities laid out in the 2012-14 Interim Basic Education Strategy (iBES) as well as the Bank’s 2011 Interim Poverty Reduction Strategy (iPRSP). The project was prepared according to the OP/BP 8.0 guidelines for emergency projects. The PDO was appropriately targeted for a rapid response project in a fragile conflict situation and addressed the urgent objectives of the iBES: improving access to and quality of education and strengthening of the education system for long-term sustainability of the sector. The PDO and the results chain remained relevant throughout the project life cycle. The results framework was appropriately defined and included indicators to measure the PDO and intermediate results to capture the results chain for each outcome. The team also incorporated plans to build capacity and additional data systems to better manage project implementation and to be able to measure higher level outcomes to which the project hoped to contribute to in the long term. Such initiatives included the NLA to measure student learning and Rapid Results Surveys to collect data on enrollments, retention, repetition and critical socio-demographic information. The team also included third-party monitoring to verify the accuracy and quality of outputs reported. The team reviewed carefully the shortcomings and successes in the previous Basic Education



Project which also focused on increasing access and improving basic education. The new project was designed by applying the relevant lessons learned. The preparation team also appropriately identified the risks based on the country context at appraisal and incorporated design features to help mitigate them to the extent possible. **Hence, quality at entry is rated satisfactory.**

### Quality of Supervision

112. The project team included staff based in both HQ and Khartoum providing clients access to in-country support as well as regular supervision. This was important because travel was limited in the first year due to delays in visa approvals. The project team demonstrated strong supervision by holding eleven review and implementation support missions including a mid-term review and monthly meetings and field missions with the PIU. It also was highly proactive in restructuring the project three times to update the results framework, reallocate funds and make project modifications (e.g., based on pilot evaluation results), and extend the project timeline to meet targets (e.g., civil works). The team prepared detailed aide memoires documenting project progress including challenges encountered and how they were overcome. They also included follow-up action items with timelines to address them. Many of the aide memoires provided useful action plans and checklists of what needed to be done and by when to keep the project on target, and to show what had been completed. Further, the ISR and status of the RF indicators were always updated with the actual values and/or explanations when warranted. **The quality of supervision is rated satisfactory.**

### Justification of Overall Rating of World Bank Performance

113. **Overall, the World Bank's performance is rated satisfactory** based on the review of the World Bank's quality at entry, performance during supervision and proactiveness, initiating three restructurings.

## D. RISK TO DEVELOPMENT OUTCOME

114. **The risk to sustaining the development outcome is substantial primarily due to the uncertain political/governance situation, insecure environment, and volatile economic conditions.** A new GPE project has been designed to help sustain BERP outcomes and maintain many of the same activities under BERP. Below is a description of the political and economic situation in Sudan followed by the new project which will play a significant role in sustaining BERP outcomes.
115. **Sudan has suffered from conflict and political instability since independence and is currently at a unique historic juncture. A new government has just been formed to lead the transition phase over the next three years.** Sudan has been hit by a political crisis in the recent months that led to dismissal of the previous regime after 30 years in power. With these changes and the recent lifting of US sanctions, the Bank's program, in concert with other development partners, is responding to support the conditions for Sudan to benefit from a strengthened engagement in the global economy.
116. **The transitional government is facing one of the most challenging environments in the world.** The country faces macroeconomic crisis: rampant inflation, massive currency devaluation, rapidly increasing arrears on international debt, and ostracism from the dollar-based international financial system. Modest economic growth persists, and the country is marked by deep poverty and inequality. Sudan remains on the



List of State Sponsors of Terrorism, limiting the country's access to concessional finance. Social indicators remain low and vary markedly across states, gender and poverty level. Social indicators are aggravated by the country's service delivery function which is still compromised by low levels of public expenditure, shortage of relevant personnel and dilapidated infrastructure.

117. **Macroeconomic instability, including high inflation, depreciating foreign exchange rates and lack of liquidity is hampering the economy.** The parallel market exchange rate depreciated considerably (200%) since January 2019. Extreme shortages exist for bread, fuel, electricity and currency/cash. Inflation is increasing (rising from 43 percent in January 2019 to 55 percent in August 2019) and expected to accelerate after monetization of the deficit. Between January and May 2019, the government borrowed 75 percent of the targeted amount for the entire year from the Central Bank of Sudan. However, without accompanying fiscal and monetary measures, the devaluation failed to reduce the premium on the parallel exchange market which reached SDG 70 per U.S. dollar in August 2019. Scarcities in oil products along with queues for cash withdrawal from banks continued, in addition to long hours of electricity shedding.
118. **Government operations are severely affected by the current political situation.** Performance of non-tax revenues and grants (which constitute 38 percent of total revenues in the 2019 budget) was weak between January and May, reaching only 22 percent of the 2019 target. Likewise, actual expenditures on goods and services (which are essential for running the government) amounted to only 14 percent of the 2019 budget allocations. Development expenditures almost halted, as actual spending reached only 13 percent of 2019 budget allocation. Foreign loans also stalled. The government contracted only one loan for trade facilities from the Arab Monetary Fund (US\$ 70 million). Grants received during the review period represent only 7.5 percent of the total grants targeted for the year.
119. **Classrooms built under the BERP are exposed to natural hazards such as floods.** In 2019, according to preliminary assessment at least 70 schools in White Nile state (non-project state) were washed-out resulting from heavy rains. Supporting schools and communities in flood-affected areas is a priority intervention for the new Government.
120. **BERP project outcomes, technical innovations and processes will continue under the new GPE project and will play a significant role in sustaining BERP investments in infrastructure, goods and services.** The new GPE project will provide support to disadvantaged schools in deteriorating economic conditions. It will continue to support improvement in the learning environment through rehabilitated classrooms in selected disadvantaged schools, and the provision of school grants and textbooks. Continued use of the CEM approach to manage school construction will make it much easier to implement under the new project as the capacity has already been established. In fact, its expansion to other sectors (e.g. health) is an excellent sign of its sustainability moving forward. Likewise, the system for school grants established under BERP along with the strong capacity to manage it at the community level will be leveraged under the new project. The textbook policy adopted under BERP will continue to be implemented and supported under the new project including: development of the curriculum, learning materials and distribution of new textbooks to additional grades. Teacher training on the new curriculum and pedagogy will continue as the capacity to train teachers is already established nation-wide under the Training of Trainers program implemented under BERP. The NLA and ASC was also institutionalized under BERP and therefore continue to be administered. The capacity within the government exists to conduct the NLA without the assistance of international firms including even the most technically rigorous challenges such as sampling. Many teachers have already been trained on how to administer learning assessments under BERP. The Training



of Trainers program will train even more teachers on administration of the NLA. The rapid survey approach used to administer the ASC under BERP will continue as the data collection method for EMIS. This fast and inexpensive methodology employing tablets which minimize human error has been fully institutionalized throughout the country with experienced surveyors and analysts in place. Also, with support from the new project, the government will continue its evidence-based policy-making such as teacher deployment and development of the ESSP 2022-26.

121. Further, the new project will incentivize an increase in education recurrent allocation by 0.5 percentage points annually for the first four years of the project. In effect, the allocation for recurrent education expenditures is expected to be 12 percent in the 2023 calendar year. The World Bank through a technical assistance to the Government helps to monitor public spending in education at the Federal and State levels.

## V. LESSONS AND RECOMMENDATIONS

122. **The Community Empowered Modality for construction is a cost-efficient and effective approach** which builds community ownership and confidence in fragile states. A comparison of CEM and CM modalities in similar localities (Kassala, N Kordofan and Kordofan) showed a cost savings of 12 percent on average for the former while producing higher quality results within the same timeframes (as documented in the MTR aide-memoire). Feedback from authorities and implementation teams in the PIU, Clusters, States and Localities indicated high satisfaction and strong belief in the long-term sustainability of the approach. The participating communities demonstrated high levels of mobilization, responsibility and accountability. They properly managed the resources despite limited training, procured works and managed contracts. The project's learning-by-doing process worked well. That is, implementation by targeted communities were done in two successive framework agreements for one classroom-block each, rather than one framework agreement for 2 classroom-blocks. This produced an incentive for rapid and successful implementation. Another lesson learned was the importance of encouraging small size local contractors to bid. Otherwise, the pool would have been limited to mid-size companies and small companies would not have had the chance to build their experience and grow into mid-size companies. Advertising by local radio stations was useful for attracting CEM bids from local contractors.
123. **A dual approach to school grants administration facilitated community capacity building.** Several school grant pilots were conducted which produced useful lessons learned that could be integrated into the scale up of the school grant sub-component. One successful method was using a dual approach to implementation. Government systems were used when capacity was adequate, and ISPs were used when capacity for planning and financial management was weak. In the latter case, ISPs provided capacity building to localities, so they could eventually take over management of their school grants. These efforts included training communities on how to communicate effectively with the project, locality, and local banks (e.g., informing the project and locality executive officers when the grants procedures would be launched, which schools had amounts payable to them and their bank account information). It also included training on how to open accounts and follow up on fund transfers to recipients' bank accounts and reporting on finalization of grants.
124. **Training and communication campaigns helped to improve monitoring of textbook distribution and accountability for deliveries.** The PIU launched a publicity campaign to prepare for the arrival of books. They sent letters to each State Ministry of Education with itemized the numbers of books per school. They



also took out whole page advertisements in the national dailies to sensitize parents to the upcoming delivery (with a dedicated hotline for related inquiries). In addition, a paper trail of the process was created from the state to localities to administrative units and to schools. A series of workshops were organized to train and sensitize stakeholders on textbook distribution procedures. To enhance accountability, this included how to file the necessary paperwork identifying who is responsible for consignment at each stage. Additional key lessons learned was that outsourcing textbook production increased quality and decreased costs (as previously described in the efficiency section).

125. **It is important to inspect books before they are exported to ensure everything meets required criteria before shipment, and to split the payment process.** The project discovered a deviation from the textbook specifications in the first delivery of the second batch of textbooks after their arrival in Sudan because the printing company did not allow the project to inspect the books before shipment despite the contractual agreement to do so. Each book was supposed to be stapled, glued and sewn - however, the first batch didn't have the triple binding. The company had to reimburse the project for this deviation from specifications. Further, based on this experience, the project changed the procurement process moving forward and split the letter of guarantees for batches three and four (to avoid making payments in full).
126. **Building local capacity for conducting national learning assessments (NLA) is crucial for continuous monitoring of student proficiency in reading and math.** NLA sensitization workshops were conducted by clusters and in Khartoum to raise awareness. This was extremely helpful in building ownership for the NLAs. In addition, there were national and state training of trainer programs developed with NLA coordinators identified and recruited for each state. Following that, state level training for all survey supervisors and enumerators were conducted. As a result, the Project supported two nationally representative learning assessments – National Learning Assessment – in Sudan in 2015 (for Grade 3) and 2018 (for Grades 3 and 6). Several schools participating in the 2015 Grade 3 NLA were assessed at Grade 6 in 2018. The team from the National Examinations Department at the Ministry of Education has been working closely with experts from the University of Oxford to design the survey. Results from the NLA were used not only for the design of the School Grants Program under the BERP (for the selection of deprived schools) but also to inform the policy at the national level (development of the curriculum) and for international benchmarking.
127. **Rapid results surveys are effective and cost-efficient in a low capacity context.** The rapid survey of schools in Sudan was designed to inform project activities (school grants, classroom construction) through a simple questionnaire. A series of workshops were conducted at the state and federal levels to share the results from the rapid surveys with locality IT and planning departments. Each state level planning department received the full database and training on how to generate specific queries and reports. The information collected was not only used to inform project activities but also to conduct the comprehensive Education Sector Analyses and Education Sector Plans in 2017-2018. While the intention was not to replace the EMIS, the rapid results method demonstrated itself to be a more appropriate data collection system than the EMIS, due to the low capacity in the country to conduct sophisticated data collection.
128. There were significant savings between the first two rounds of data collection, from US\$5-10 per school enumerator to US\$3. This represented a 28 percent savings, even with a 22 percent increase in the number of schools covered in the second round. Costs were saved by low-cost printing of brief



questionnaires and effective training and sensitization of stakeholders. The latter increased ownership and therefore, school coverage at the state and locality levels. In addition, the project found that digitalizing the data collection process through mobile technologies (i.e. tablets) took half the time (decreasing from six weeks to three weeks) and improved data quality (by eliminating human data entry errors). BERP supported the procurement of tablets and utilized free software to design questionnaires and collect data. The project used “KoBo Toolbox” which is an open source suite of tools for data collection and analysis developed by the Harvard Humanitarian Initiative. It can also assemble geographical coordinates of objects to do school mapping.

129. Hence, the rapid survey process was not only efficient and cost-effective but highly sustainable. Capacity was built to both collect and use the data throughout the entire system from the schools to the state and localities all the way up to the federal level. Therefore, there was strong ownership and capacity for implementation.



## ANNEX 1. RESULTS FRAMEWORK AND KEY OUTPUTS

### A. RESULTS INDICATORS

#### A.1 PDO Indicators

**Objective/Outcome:** Improved learning environment in targeted areas

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Direct project beneficiaries	Number	5051304.00 01-Sep-2010	5300000.00 01-Sep-2010	6079522.00 28-Feb-2018	6020820.00 31-Oct-2018
Female beneficiaries	Percentage	45.00	48.00	48.50	48.00

**Comments (achievements against targets):**

The target for direct beneficiaries was 99% achieved. The target for % female was fully achieved.

**Objective/Outcome:** Increased availability of textbooks



Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of textbooks purchased and delivered to basic schools	Number	0.00 11-Jul-2011	9600000.00 20-Nov-2017	13000000.00 28-Feb-2018	22000000.00 11-Dec-2018
<b>Comments (achievements against targets):</b> The target was exceeded (169% achieved).					

**Objective/Outcome:** Strengthened education planning and management mechanisms

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
System for learning assessment at the primary level	Yes/No	N 11-Jul-2013	Y 11-Jul-2013		Y 20-Nov-2017
Utility of the learning assessment system	Number	0.00	3.00		3.00
<b>Comments (achievements against targets):</b> The target was fully achieved. The National Learning Assessment (NLA) was conducted twice (in 2015 and 2018). Through these experiences, local capacity was built and the system is now in place for it to continue in the future.					



Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Timely annual production of data through EMIS supplementary tool	Yes/No	N 07-Jul-2011	Y 20-Nov-2017		Y 28-Feb-2018
<b>Comments (achievements against targets):</b> The target was fully achieved. The EMIS/Rapid survey has been conducted regularly for the last four academic years: 2015/16; 2016/17; 2017/18; 2018/19.					
Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Full ESSP developed	Text	Interim basic Education Plan for 2012-2014 07-Jul-2011	yes 31-Oct-2013	ESSP 2017-2021 developed 28-Feb-2018	ESSP 2018-2022 developed 11-Dec-2018
<b>Comments (achievements against targets):</b> The target was fully achieved. The ESSP 2018-2022 was finalized before project completion.					



## A.2 Intermediate Results Indicators

**Component:** Improvement of the learning environment

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of project beneficiaries with access to additional classrooms, built at the primary level, resulting from project interventions	Number	0.00 11-Jul-2013	80000.00 11-Jul-2013	44480.00 28-Feb-2018	66320.00 31-Oct-2018

**Comments (achievements against targets):**

The target was exceeded (149% achieved).

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of additional classrooms built or rehabilitated at the primary level resulting from project interventions.	Number	0.00 11-Jul-2013	2000.00 11-Jul-2013	1600.00 28-Feb-2018	1226.00 14-Feb-2019

**Comments (achievements against targets):**



The target of 1,600 was partially achieved by project closing with 1,226 completed (77%). However, since project completion, the target has almost been achieved, as the government reported a total of 1,566 classrooms completed with the remaining under construction.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of communities receiving school construction management training	Number	0.00 11-Jul-2013	500.00 11-Jul-2013	149.00 28-Feb-2018	300.00 31-Oct-2018

**Comments (achievements against targets):**

The target was exceeded (201% achieved).

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
System development of school grants program	Text	No system in place 07-Jul-2011	Roll out of pilot in selected eligible communities 28-Sep-2015	Scale up of pilot in additional eligible communities 28-Feb-2018	School grant mechanism developed. 11-Dec-2018

**Comments (achievements against targets):**



The target was achieved. The school grant system was developed through the successful execution and scaling up of multiple pilots. System-wide procedures were established and substantial capacity was built so communities can manage their school grants in the future.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of communities receiving school grants	Number	0.00	5305.00	1500.00	6399.00
		07-Jul-2011	20-Nov-2017	28-Feb-2018	11-Dec-2018

**Comments (achievements against targets):**  
The target was exceeded (423% achieved).

**Component:** Increasing the availability of textbooks and learning materials

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
New textbook policy adopted and implemented	Text	No	Textbook policy adopted		Textbook policy adopted
		07-Jul-2011	20-Nov-2017		11-Dec-2018

**Comments (achievements against targets):**



The target was fully achieved. Textbook policy along with procurement and management strategies were developed in consultation with stakeholders on content, gender and conflict sensitivity and with technical assistance from an international consultant.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Revision and development of core subject textbooks (Arabic, Mathematics, Science)	Text	No	Revision of textbooks and teacher's guide for Grade 1 to 4 core subjects completed		Grade 1 to 5 core subject textbooks revised
		07-Jul-2011	20-Nov-2017		11-Dec-2018

**Comments (achievements against targets):**

The target was exceeded. The project went above and beyond the target of grades 1-4 and revised core subject textbooks and teacher guides from grades 1-5.

**Component:** Strengthening the monitoring and management mechanisms of the education system

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
National learning assessment designed	Text	No	NLA report disseminated	Results of NLA disseminated and	2 NLA were conducted in 2015 and 2018



		07-Jul-2011	20-Nov-2017	used for policy making 28-Feb-2018	11-Dec-2019
<p><b>Comments (achievements against targets):</b> The target was fully achieved. Both the 2015 and 2018 NLA were disseminated and used for policy making. The 2015 NLA was disseminated and discussed with all states in 2016. The results were used to inform targeting of the school grants program. Likewise the 2018 NLA was presented to the Minister Council in 2019. The findings will be used for future work in the education sector and implementation of the new GPE project.</p>					

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Development of teacher management system	Text	No	Database completed	Teacher management report available	Teacher database developed and used for the chapter on Teacher management in the Education Sector Analysis Report 2017/18
		07-Jul-2011	20-Nov-2017	28-Feb-2018	11-Dec-2018
<p><b>Comments (achievements against targets):</b> The target was fully achieved. The teacher management database was completed in 2016 yielding data for policy and strategy at the locality, state and federal level. It provides information for monitoring teacher deployment and identifying areas of need for prioritizing in-service and</p>					



pre-service training. The database was used and reported on in the teacher management chapter of the Education Sector Analysis including analyses on the distribution of teachers by school and state, the share of assignment by school, locality and state.



## B. KEY OUTPUTS BY COMPONENT

<b>Objective/Outcome 1</b> Improved learning environment in targeted areas	
Outcome Indicators	1. Beneficiaries with access to additional classrooms built at the primary level, resulting from the project
Intermediate Results Indicators	1. Additional classrooms built at the primary level resulting from project interventions 2. Communities receiving school grants 3. Communities receiving school construction management training 4. System development of school grants program
Key Outputs by Component (linked to the achievement of the Objective/Outcome 1)	1. Training modules for communities on how to manage school construction activities were developed 2. School grants training programs, operation manuals and guidelines were developed
<b>Objective/Outcome 2</b> Increased availability of textbooks	
Outcome Indicators	1. Direct project beneficiaries, (% female) 2. Textbooks purchased and delivered to basic schools
Intermediate Results Indicators	1. New textbook policy adopted and implemented 2. Revision and development of core subjects and textbooks
Key Outputs by Component (linked to the achievement of the Objective/Outcome 2)	1. 66,000 teachers from 189 localities in primary schools trained on the new curriculum, textbooks, practice assessments and related teaching methodologies 2. Each locality developed at least two master trainers in Math and Arabic for grades 1 to 3



	3. Publicity campaigns were conducted in the daily news to sensitize parents about upcoming book deliveries
<b>Objective/Outcome 3</b> Strengthened education planning and management mechanisms	
Outcome Indicators	<ol style="list-style-type: none"><li>1. System for learning assessment at the primary level (rating scale) in place</li><li>2. Timely annual production of data through EMIS supplementary tool</li><li>3. Full ESSP developed</li></ol>
Intermediate Results Indicators	<ol style="list-style-type: none"><li>1. Development of teacher management system</li><li>2. National learning assessment designed</li></ol>
Key Outputs by Component (linked to the achievement of the Objective/Outcome 3)	<ol style="list-style-type: none"><li>1. Interviewers were trained on how to collect annual school census data and input it into tablets</li><li>2. Essential teacher information on demographics and qualifications was collected and inputted into a database</li><li>3. Teachers were trained on how to administer the NLA to students</li><li>4. The Education Sector Analysis was completed</li></ol>

**ANNEX 2. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION****A. TASK TEAM MEMBERS**

Name	Role
<b>Preparation</b>	
Elizabeth Ninan	Task Team Leader(s)
Moustapha Ould El Bechir	Senior Procurement Specialist(s)
Mohamed Yehia Abdl Karim	Financial Management Specialist
Bedilu Amare	Environmental Specialist
Yasmin Tayab	Senior Social Development Specialist
Aymen Musmar Ali	Education Specialist
Ramahatra Rakotomala	Senior Education Specialist
Cristina Santos	Senior Education Specialist
Kaliope Azzi-Huck	Senior Operations Officer
<b>Supervision/ICR</b>	
Thanh Thi Mai, Omer Nasir Elseed	Task Team Leader(s)
Pascal Tegwa, Nizar Mohamed Ahmed Abu Elzoul	Procurement Specialist(s)
Adenike Sherifat Oyeyiola	Financial Management Specialist
Tracy Hart	Environmental Specialist
Anton Karel George Baare	Social Specialist
Aymen Musmar Ali	Team Member
Dmitry Chugunov	Team Member
Samuel Lule Demsash	Social Specialist

**B. STAFF TIME AND COST**



Stage of Project Cycle	Staff Time and Cost	
	No. of staff weeks	US\$ (including travel and consultant costs)
<b>Preparation</b>		
FY12	18.603	515,566.33
FY13	36.664	595,190.55
FY14	20.569	233,829.70
FY15	0	16,356.00
<b>Total</b>	<b>75.84</b>	<b>1,360,942.58</b>
<b>Supervision/ICR</b>		
FY14	70.200	144,595.99
FY15	113.888	451,238.52
FY16	83.564	313,531.27
FY17	58.293	221,015.56
FY18	57.901	396,754.95
FY19	18.757	142,041.19
<b>Total</b>	<b>402.60</b>	<b>1,669,177.48</b>

**ANNEX 3. PROJECT COST BY COMPONENT**

Components	Amount at Approval (US\$M)	Actual at Project Closing (US\$M)	Percentage of Approval
Component 1: Improving the learning environment for schools	36.2	46.70	129
Component 2: Increasing the availability of textbooks	25.8	17.80	69
Component 3: Strengthening the monitoring and management mechanisms of the education system	14.5	12.00	83
<b>Total</b>	<b>76.5</b>	<b>76.50</b>	<b>100</b>



## ANNEX 4. EFFICIENCY ANALYSIS

1. The economic analysis presents: (1) an analysis of the internal efficiencies of Sudan's education system and (2) an analysis of Sudan's Human Capital Index (HCI) over the course of the project.
2. **Internal efficiencies of Sudan's education system.** Government benefits are estimated in terms of reduced inefficient public spending as a result of improved internal efficiency in Sudan's education system. Inefficient spending is defined as the money that the government spends through teacher salaries and other education-related items (i.e., goods and services for schools) on pupils that repeat grades and drop out before completing the basic education cycle. We look at the evolution of inefficient government spending on schools that benefited from BERP either by receiving textbooks, teacher training (all public schools), school improvement grants or new construction (e.g., classrooms, latrine stances, and fences).

**Table 1: Number of schools, students, repeaters, promotion, repetition, and dropout rates**  
**Public basic school information, 2015-2018**

	2015	2016	2017	2018	2015-2018 change
Number of public schools	15,006	15,531	16,037	16,335	+1,329
Number of students	4,751,254	5,107,441	5,332,343	5,407,634	+656,380
Number of repeaters	273,016	280,557	295,014	251,234	-21,782
Promotion rates	84.5%	84.5%	85.1%	85.5%	+1.1 pp
Repetition rates	5.6%	5.4%	5.5%	4.6%	-1.0 pp
Dropout rates	9.9%	10.0%	9.4%	9.9%	0.0%

Source: Estimates based on the Annual School Census (ASC) data for 2015-2018.

3. **As BERP targeted pupils in lower grades, the improvement in promotion, repetition, and dropout rates was more pronounced.** Overall, repetition rates decreased from 5.6% in 2015 to 4.6% in 2018 ( $p < 0.01$ ) – by 1.0 percentage point, while in lower grades (Grades 1-4) repetition rates decreased from 5.9% in 2015 to 4.7% ( $p < 0.01$ ) in 2018. Dropout rates were stagnant at approximately 10% meaning that one out of every ten children leave the system at each grade of basic education in Sudan.
4. **In schools that received school grants and new classrooms, repetition rates decreased** from 6.8% in 2015 to 5.6% in 2018 ( $p < 0.01$ ) – by 1.2 percentage points. Repetition rates in lower primary grades (Grades 1-4) decreased from 7.3% to 5.8% in 2015-2018 ( $p < 0.01$ ). Dropout rates in those schools decreased from 10.8% in 2015 to 10.2% in 2018 ( $p < 0.01$ ) (from 8.5% to 6.3% in lower primary [ $p < 0.01$ ]). BERP contributed to higher student retention in target schools.
5. **Improved repetition rates resulted in higher promotion rates** in public schools, which on average increased by 1.1 percentage points. Again, improvements in promotion rates were especially pronounced in lower grades, which benefited the most from the BERP interventions: in grade 2 – by 3.1% ( $p < 0.01$ ), in grade 3 – by 2.2% ( $p < 0.01$ ), and in grade 4 by 2.6% ( $p < 0.01$ ).



6. Inefficient public spending is estimated by multiplying unit cost in basic education by the number repeaters and those students that drop out from school. According to the Salary Scale of Civil Servants in Sudan, the average teacher salary is equivalent to SDG 15,721. The teacher wage bill constitutes, on average, 90% of overall public spending in education (Sudan Education Sector Analysis, 2019). Thus, the unit cost is estimated based on the number of basic public-school teachers and the number of students studying there.
7. **According to the estimates, inefficient public spending in Sudan decreased** from SDG 360.5 million in 2015 to SDG 345.9 million in 2018 – a 4.1% drop. The decrease in inefficient government spending is equivalent to SDG 31.8 million (USD 5.3 million in 2015 prices<sup>15</sup>). As a share of total public spending in basic education, inefficient spending decreased from 14.1% in 2015 to 13.0% in 2018.

Table 2: Estimates of inefficient government spending, million SDG

	2015	2016	2017	2018	change
Actual	360.5	361.0	350.0	345.9	-4.1%
as % of total spending	14.1%	14.0%	13.5%	13.0%	-1.1 pp
Simulated (w/o intervention <sup>16</sup> )	360.5	364.5	366.3	377.7	+4.8%
as % of total spending	14.1%	14.1%	14.1%	14.2%	+0.1 pp

8. **Human Capital Index.** Human capital is the key determinant of economic development and wealth. The new generations of workers are facing increased demand for higher levels of human capital, including advanced cognitive and socio-behavioral skills. As the nature of work evolves in response to rapid technological change, investing properly in human capital is considered not only desirable but necessary in the pursuit of prosperity. To illustrate this concept, the World Bank developed the Human Capital Index (HCI), which measures the impact of underinvesting in human capital on the productivity of the next generation of workers. It is defined as the amount of human capital that a child born today can expect to achieve in view of the risks of poor health and poor education currently prevailing in the country where that child lives (See details in Box 1).
9. **Health and education are important components of human capital and are interrelated. Health indicators include survival, stunting, and nutrition.** Stunting has considerable impacts since a healthy diet during infancy, and childhood increases achievement at school.<sup>17</sup> Also, investing in prenatal care and maternal education improves infant health, leading to improved educational attainment, mental health, and higher earnings later in life.<sup>18</sup>
10. **Education is a major component of the HCI, and Africa is the region of the world with the highest economic returns to education.** The key drivers of these returns are the quality of education and the average years of schooling that a child may benefit from. Each year of schooling raises average

<sup>15</sup> 1 USD = 6.0 SDG in 2015.

<sup>16</sup> Assuming that repetition and dropout rates remain constant at 2015 level.

<sup>17</sup> Belot and James (2011); Sandjaja et al. (2013).

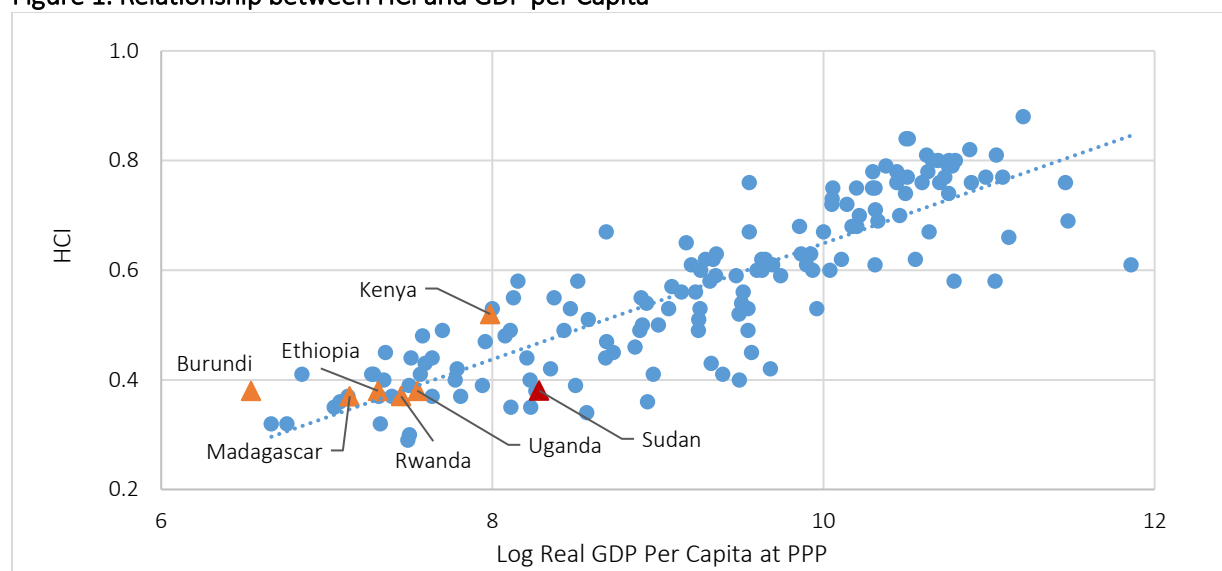
<sup>18</sup> Andrabi, Das, and Khwaia (2012); Gertler et al. (2014); Walker et al. (2011).



earnings by 11.3 percent for males and 14.5 percent for females.<sup>19</sup> Education interventions are shown to have a direct impact on skills, academic achievement, and, consequently, earnings. For instance, attending pre-school for one year enhances cognitive skills during early childhood, improves academic skills during elementary school, and increases earnings by 5 percent.<sup>20</sup> Additionally, education contributes to empowering women, allowing them to access better jobs, have fewer children, and invest more in each child.

**11. Empirical analyses show that the HCI components are highly correlated to productivity and economic growth.** The HCI and GDP per capita correlation is 0.86 (Figure 1). Between 10 and 30 percent of per capita gross domestic product (GDP) differences are attributable to cross-country differences in human capital, which is also an important input to technological innovation and long-term growth.<sup>21</sup> As illustrated by figure 1, Sudan's HCI is below what would be predicted by its income level, whereas Kenya and Burundi, for instance, score above what is expected by their income levels.

Figure 1. Relationship between HCI and GDP per Capita



Source: World Bank Human Capital Index

**12. Analyses of HCI indexes among developing countries show that Sudan is underinvesting in the future productivity of its citizens.** A child born in Sudan today will be only 38 percent, “as productive when she grows up as she could be if she enjoyed complete education and full health”.<sup>22</sup> Sudan is ranked among the countries in the lowest quartile of the HCI distribution, with an index slightly lower than the average for the SSA region.

<sup>19</sup> Montenegro and Patrinos (2014)

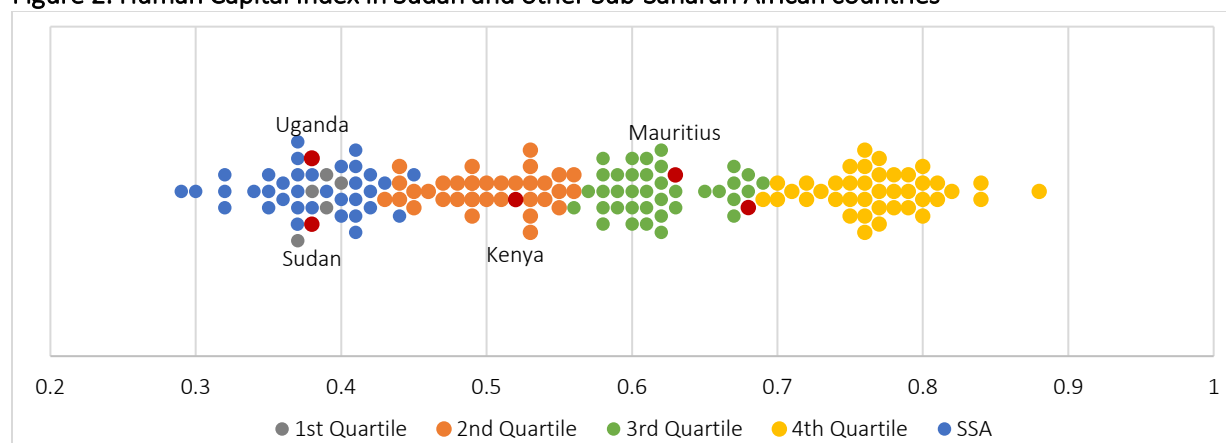
<sup>20</sup> Berlinski, Galiani and Gertler (2009)

<sup>21</sup> Hsieh and Klenow (2010)

<sup>22</sup> The official definition of HCI.



Figure 2. Human Capital Index in Sudan and other Sub-Saharan African countries



Source: World Bank Human Capital Index

**13. Sudan scores low in the HCI, underscoring the importance of investing in education to improve outcomes for the population.** A child born today in Sudan is expected to complete only 7.3 years of education combined by age 18, compared to the regional average of 8.1.23 Because of the low levels of learning achievement in Sudan, this is only equivalent to 4.4 years of learning (see ‘Learning-Adjusted Years of School’ component in table 3), with 2.9 years considered as lost due to poor quality. Sudan’s score on this component is below the SSA average. The evidence of poor learning outcomes is substantiated by the national Early Grade Reading Assessment’s (EGRA) results – the NLA administered in 2014/15 and 2017/18.24 For instance, only 20 percent of children can read 15-30 words per minute in the third grade of basic education, while the expectation is that all children should be able to read a simple paragraph by that age (2017/18).

Table 3. HCI by components in Sudan and other Sub-Saharan African Countries

	Mauritius	Kenya	SSA	Ethiopia	Sudan	Uganda	Rwanda
<b>HCI Component 1: Survival</b>							
Probability of Survival to Age 5	0.987	0.954	0.934	0.942	0.937	0.951	0.962
Contribution to Productivity	0.99	0.95	0.93	0.94	0.94	0.95	0.96
<b>HCI Component 2: School</b>							
Expected Years of School	12.5	10.7	8.1	7.8	7.3	7.0	6.6
Harmonized Test Scores	473	455	374	359	380	397	358
Learning-Adjusted Years of School	9.5	7.8	4.9	4.5	4.4	4.5	3.8
Contribution to Productivity	0.70	0.61	0.48	0.47	0.46	0.47	0.44
<b>HCI Component 3: Health</b>							
Survival Rate from Age 15-60	0.859	0.787	0.732	0.786	0.782	0.698	0.808
Fraction of Children Under 5 Not Stunted	...	0.738	0.684	0.616	0.618	0.711	0.633
Contribution to Productivity	0.91	0.89	0.87	0.87	0.87	0.86	0.88
<b>Human Capital Index (HCI)</b>	<b>0.63</b>	<b>0.52</b>	<b>0.39</b>	<b>0.38</b>	<b>0.38</b>	<b>0.38</b>	<b>0.37</b>

Source: World Bank Human Capital Index

**14. Due to improvements in the education component of the index, Sudan’s HCI increased from**

<sup>23</sup> Pre-primary level in Sudan is two years, basic (primary) level is eight grades, and secondary is three.

<sup>24</sup> An assessment focused on early grade proficiency in basic literacy skills, typically conducted in grades 2-4.



**0.38 in 2015 to 0.39 in 2018.** Learning-adjusted years of schooling increased from 4.4 in 2015 to 4.8 in 2018. Based on the empirical literature, an additional year of school raises earnings by about 8 percent (Montenegro and Patrinos 2014).<sup>25</sup> Thus, the increase in the learning-adjusted years of schooling in Sudan is equivalent to a 3.6 percent increase in labor productivity.

**Box 1: What is the Human Capital Index?**

The Human Capital Index (HCI) measures the human capital that a child born today can expect to attain by age 18, given the risks to poor health and poor education that prevail in the country where she lives. It is based on three components:

***Survival Component: Probability of survival to age 5***

Measured using the under-5 mortality rate to reflect the fact that not all children born today will survive until the age when the process of human capital accumulation through formal education begins.

***School Component: Expected years of school and harmonized test scores***

Combines information on the quantity (expected years of school) and quality (harmonized test scores) of education. Learning-Adjusted Years of School are then generated by multiplying expected years of school by the ratio of test scores – calculated from major international learning assessments – to 625, corresponding to the TIMSS benchmark of advanced achievement. For example, expected years of school in Sudan is 7.3, and the average test score is 380, then the country has  $7.3 \times (380/625) = 4.4$  Learning-Adjusted Years of School. The distance between 7.3 and 4.4 represents a learning gap equivalent to 2.9 years of school.

***Health Component: Survival rate from age 15-60 and the fraction of children under 5 not stunted***

This component uses two proxies for the overall health environment: adult survival rates measured by the share of 15-year-olds who survive until age 60, and the fraction of children under 5 who are not stunted. The first reflects a variety of health outcomes that a child born today may experience as an adult. The later serves as an indicator for the prenatal, infant, and early childhood health environments, which have important consequences for adult health and well-being.

***Human Capital Index***

The overall index is constructed by multiplying the three components' contributions to relative productivity, as follows:  $HCI = Survival \times School \times Health$ . The benchmark of complete high-quality education corresponds to 14 years of school and a harmonized test score of 625. The benchmark of full health corresponds to 100 percent child and adult survival and a stunting rate of 0 percent.

**Source:** Gatti, Roberta V.; Kraay, Aart C.; Avitabile, Ciro; Collin, Matthew Edward; Dsouza, Ritika; Dehnen, Nicola Anna Pascale. 2018. The Human Capital Project (English). Washington, D.C.: World Bank Group.

<sup>25</sup> Montenegro and Patrinos (2014)



**ANNEX 5. BORROWER, CO-FINANCIER AND OTHER PARTNER/STAKEHOLDER COMMENTS**

No comments received



## **ANNEX 6. SUPPORTING DOCUMENTS**

Aide-memoires and Implementation Status and Results Reports 2013-2019

Andrabi, T., Das, J., and Khwaja, A. I. (2012). What Did You Do All Day? Maternal Education and Child Outcomes. *Journal of Human Resources* 47 (4): 873–912.

Belot, M., and J. James (2011). Healthy School Meals and Educational Outcomes. *Journal of Health Economics* 30 (3): 489–504.

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Gatti, Roberta V.; Kraay, Aart C.; Avitabile, Ciro; Collin, Matthew Edward; Dsouza, Ritika; Dehnen, Nicola Anna Pascale. 2018. *The Human Capital Project* (English). Washington, D.C.: World Bank Group.

Gertler, P., J. J. Heckman, R. Pinto, A. Zanolini, C. Vermeersch, S. Walker, S. M. Chang, and S. Grantham-McGregor (2014). Labor Market Returns to an Early Childhood Stimulation Intervention in Jamaica. *Science*, 344(6187), May: 998-1001.

Glewwe, P., E. Hanushek, S. Humpage, and R. Ravina. (2013). School resources and educational outcomes in developing countries: A review of the literature from 1990 to 2010. *Education Policy in Developing Countries* (pp. 13-64), University of Chicago Press.

Hsieh, Chang-Tai, and Peter J. Klenow (2010). Development Accounting. *American Economic Journal: Macroeconomics* 2 (1): 207–23.

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**ANNEX 7. MODIFICATIONS TO KEY PROJECT INDICATORS AND RESULTS FRAMEWORK DURING PROJECT RESTRUCTURINGS IN 2015, 2017 and 2018**

Indicator (as stated in Project Paper)	Baseline and Target (as stated in the Project Paper)		Post 2015 Restructuring changes	Post 2017 Restructuring changes	Post 2018 Restructuring changes
	Baseline	Target			
<i>Direct project <b>beneficiaries</b> (#, PDO), of which female (%)</i>	0	5.3m	<b>Target increased</b> to 6.5m (48% female) based on newly available and more accurate data on student enrollment collected through rapid EMIS. Indicator was defined as total enrolments as all students would benefit from component 2.  <b>Baseline</b> was updated to: 5,051,304 (45% female)	Targets <b>decreased</b> to 6,079,522 (48.5% female) from 6,505,950 (48% female]	No change
<i>Number of direct <b>beneficiaries with access to textbooks</b> (PDO)</i>	0	5.3m	Replaced with <i>Number of <b>textbooks purchased and delivered</b> to basic schools</i>	Target increased to 13m from 9m	No change
<i>Number of project <b>beneficiaries with access to additional classrooms</b> built at the primary level, resulting from the project (IR)</i>	0	80,000	No change	Target <b>decreased</b> to 44,480 from 80,000	No change
<i>Number of communities receiving school <b>construction training</b> (IR)</i>	0	500	No change	Target <b>decreased</b> to 149 from 500	No change



Number of <b>additional classrooms</b> built at the primary level, resulting from project interventions (IR)	0	2,000	No change	Target <b>decreased</b> to 1,112 from 2,000	Target increased to 1,600
			New: Number of communities receiving <b>school grants</b>	Target increased to 1,500 from 750	No change
System for <b>learning assessment</b> at primary level (PDO)	No	yes,3	No change	No change	No change
Timely annual production of data through <b>EMIS</b> supplementary tool (PDO)	No	Yes	No change	No change	No change
Full <b>ESSP</b> developed by October 2013 (PDO)	No	Yes	Revised to <i>Full ESSP developed</i> ; Target revised to <i>ESSP finalized</i>	Target revised to <i>ESSP developed</i>	No change



## ANNEX 8. PROJECT ACHIEVEMENTS AND TARGETS FOR KEY INDICATORS

**Table 1. Project achievements and targets for PDO1**

Indicator	Original target	Revised target 2015	Revised target 2017	Revised target 2018	Actual achieved by project end	% Target Achieved (actual to final target)
Beneficiaries with access to additional classrooms built at the primary level, resulting from the project (IR)	80,000	--	44,480	--	66,320	149% <b>Target exceeded</b>
Additional classrooms built at the primary level resulting from project interventions (IR)	2,000	--	1,112	1,600	1,226	77% <b>Partially achieved</b> Since project closing, additional classrooms were completed for a total of 1,566 classrooms. Hence, the final target of 1,600 is almost achieved (98%) before submission of the ICR. The remaining are under construction.
Communities receiving school construction management training (IR)	500	--	--	149	300	201% <b>Target exceeded</b>
Communities receiving school grants (IR)	750	--	1,500	--	6,339	423% <b>Target exceeded</b>



**Table 2. Project achievements and targets for PDO2**

Indicator	Original target	Revised target 2015	Revised target 2017	Revised target 2018	Achieved by project end	% Target Achieved (actual to target)
Direct project beneficiaries (% female) (PDO)	5,300,000	6,505,950 (48% female)	6,079,522 (48% female)	--	6,020,820 (48% female)	99% achieved  % female target fully achieved
Textbooks purchased and delivered to basic schools (PDO)	9,000,000	--	13,000,000	--	22,000,000	169% Target exceeded
new textbook policy adopted and implemented (IR)	textbook policy adopted	--	--	--	textbook policy developed and adopted in 2017	Target fully achieved
revision and development of core subjects and textbooks (IR)	revision of textbooks and teacher guides for up to grade 4	--	--	--	grade 1 to 5 core subject textbooks revised	Target exceeded



**Table 3. Project achievements and targets for PDO3**

Indicator	Original target	Revised target 2015	Revised target 2017	Revised target 2018	Achieved by project end
System for learning assessment at the primary level (rating scale) in place (PDO)	Yes, 3	--	--	--	Yes, 3 The system put in place is the NLA which has been conducted twice (in 2015 and 2018) for which the results were published and disseminated. <b>Target fully achieved</b>
Timely annual production of data through EMIS supplementary tool (PDO)	Yes	--	--	--	Yes EMIS/Rapid survey have been conducted regularly for the last four academic years: 2015/16; 2016/17; 2017/18 and 2018/19. <b>Target fully achieved</b>
Full ESSP developed (PDO)	Yes	ESSP finalized	ESSP developed	--	yes, ESSP 2018-22 is finalized. <b>Target fully achieved</b>
Development of teacher management system (IR)	Teacher management report available	--	--	--	The teacher management database was completed in 2016. The information was used for a detailed report and recommendations for teacher management chapter in the ESA Report 2017/18. <b>Target fully achieved</b>
National learning assessment designed (IR)	Results of NLA disseminated and used for policy making	--	--	--	The NLA was conducted in 2015 and 2018. The NLA report was published and presented to the Minister Council. The NLA results are used for the school grant program targeting. <b>Target exceeded</b>