

Cost and budget impact analysis of inclusive education for children with disabilities in Cameroon

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Executive summary

Children with disabilities are vulnerable to discrimination. In terms of education, this is compounded by practical barriers, accessibility being restricted by the infrastructure of school buildings and the lack of teacher training for inclusive education.

Cameroon is no exception, with studies showing inequalities in terms of access and quality of education for children with disabilities. In the Northwest Region, children with disabilities are almost 20 times more likely not to be enrolled in school, and those attending school were more likely to be in lower grades and to have repeated a grade.

There is a paucity of evidence on the cost and financing of inclusive education, particularly in low- and middle-income countries. With funding from Irish Aid, Sightsavers has been implementing a pilot project for disability-inclusive education with the Ministry of Education in Cameroon since 2014. To support the roll out of inclusive education in Cameroon, Sightsavers conducted several pieces of work, including a cost and budget impact study to support the government's planning and budgeting process.

The aim of the study is to contribute to the existing knowledge base on disability inclusion in education. It will investigate the costs of making schools inclusive for children with disabilities and the budget impact of scaling up inclusive education in Cameroon.

The specific objectives include:

1. Determining the costs of making primary schools inclusive for children with disabilities, using real data from the demonstration project implemented by Sightsavers and the Government of Cameroon.
2. Analysing the budget impact of rolling out inclusive education in Cameroon using different scenarios.

The cost study is a retrospective study using predominantly secondary data consisting of routine financial data from the inclusive education pilot project (for the period 2017-2020). The analysis generates two sets of costs:

1. Actual costs by reviewing expenditures linked to the implementation of the pilot project in four demonstration schools.
2. Standard costs based on guidelines / minimum quality standards set for inclusive education in Cameroon.

The expenditures were reported in both Central African CFA Francs (XAF) and US Dollars (USD) for comparison.

The budget impact analysis is carried out from the budget holders or payer's perspective to calculate the budget impact of scaling up inclusive education at both

national and regional level. The time horizon considered for the budget impact analysis is nine years, corresponding to implementation period of the education sector plan (2022-2030). The budget impact analysis estimates the funding requirements for scaling up inclusive education to government primary schools in all ten regions in Cameroon, based on two distinct scenarios:

- Scenario 1 is aligned with government commitment to extend the inclusive education pilot initiative to 428 government primary schools
- Scenario 2 involves inclusive education being rolled out in all government primary schools, reaching up to 15,324 schools in 2030

Results show that the total expenditure of the inclusive education pilot project was XAF 300.5 million (USD 523,425) over four years (2017-2020). Nearly half of the pilot project expenditure (46%) was devoted to providing inclusive education training to the education personnel, to support the mainstreaming of, and the quality of, inclusive education. It consisted of personnel expenditures (47%), including fees, indemnities and per diem for technical assistants and stakeholders participating in trainings and other project activities.

Expenditure for the inclusive education project activities at school and community level amounted to XAF 13,420,678 (USD 23,354) per school per year and XAF 88,294 (USD 154) per child a with disability per year on average (for the four demonstration schools).

Other expenditures for project activities related to the promotion and strengthening of inclusive education in Cameroon, and project management / overheads expenditures amounted to respectively XAF 25.8 million (USD 45,212) and XAF 60 million (USD 104,547).

Expenditures for minimum standard activities amount to XAF 217.4 million (USD 378,353), or 72% of the total expenditure of the inclusive education demonstration project. Key cost drivers are personnel costs and meal, accommodation and venue rental costs for the training and continuing professional development (respectively 19% and 13% of the minimum standard costs, and 11% and 6% for the training and support for the work of inclusion champions).

Adopting strategies, such as inspectors training teachers on inclusive education during pedagogic weeks and/or privileging the use of venues at inspectorates or schools for trainings for the scale up of inclusive education in Cameroon, could lead to significant reductions in the costs associated with inclusive education.

Over the period 2022-2030, the overall budget impact of scaling up inclusive education to 428 government primary schools (scenario 1) is close to XAF 27.84 billion (USD 47.7 million) and would result in a total of 52,850 children with disabilities aged 6 starting primary school, and 231,127 school years completed by children with disabilities across all grades. Over the same period, the budget impact of rolling out inclusive education in all government primary schools in Cameroon

would amount to XAF 735.6 billion (USD 1.26 billion), resulting in a total of 344,072 children with disabilities aged 6 starting primary school and 1,401,942 school years completed by children with disabilities across all grades. Scenarios 1 and 2 would respectively address 12% and 72% of the need for inclusive education among children with disabilities of primary school age over the period 2022-2030.

The study provides evidence and data to support the planning and budgeting process for strengthening inclusive education and support the inclusion of children with disabilities in mainstream government primary schools in Cameroon.

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Abbreviations

BCEAO	Central Bank of West African States
BEAC	Bank of Central African States
BIA	Budget impact analysis
OPD	Organisation of people with disabilities
FY	Financial year
LG	Local government
IE	Inclusive education
IIEP	International Institute for Educational Planning
ISPOR	International Society for Pharmacoeconomics and Outcomes Research
MINAS	Ministry of Social Affairs
MINEDUB	Ministry of Basic Education
MINESEC	Ministry of Secondary Education
MSI	Multi-Sensory Impairment
NGO	Non-governmental organisation
SIL	Language Initiation Section
WHO	World Health Organization
XOF	CFA Franc (BCEAO)
XAF	CFA Franc (BEAC)
USD	United States dollar
VI	Visual impairment

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Introduction

Background

The right to equal and quality education, initially set out in Article 28 of the Convention on the Rights of the Child (UNICEF, 1989) and Article 24 of the Convention on the Rights of Persons with Disabilities, is also reinforced in the 2030 Sustainable Development Agenda, adopted in September 2015.

In Cameroon, legislation has been passed to protect the rights of children with disabilities. For example, the 1983 Law No. 83/013 (supported by the subsequent decree 90/156 in 1990) recognised the protection of children with disabilities and the need for families to provide them with regular education. Article 9 of this decree also emphasised that building plans must be made accessible for people with disabilities.

In 2010, the decree of Education and Welfare of Persons with Disabilities and Other Special Needs Children was passed into law. This law recognised the need to strengthen the self-esteem and psychological wellbeing of children with disabilities as well as improving their built and lived environments [1, 2]. There is observed political will concerning inclusive education in Cameroon as the Ministry of Education signed a circular on 4 August 2015, transforming 69 government primary schools to inclusive primary schools.

Sightsavers and its partners are currently implementing various initiatives to support inclusive education provision for children with disabilities, and focus on accessibility, equity and quality. In West Africa, Sightsavers is implementing inclusive education projects in Senegal, Mali, Liberia, Sierra Leone and Cameroon, with a clear involvement at school level, on education system strengthening, and on policy development.

With funding from Irish Aid, Sightsavers has been implementing an inclusive education project with the Ministry of Basic Education in Cameroon since 2014. To support the ministry in defining and scaling up an inclusive education model adapted for the country, Sightsavers has conducted several pieces of work, including a costing and budget impact study. The study estimates the cost of supporting inclusive education system and transitioning to inclusive schools, based on a pilot project covering four demonstration schools in the Central and Far North Regions.

It also calculates the budget impact of rolling out inclusive education in government primary schools at the national level, based on the minimum standards set during the pilot project capitalisation exercise. The main purpose is to generate evidence to support planning and budgeting activities for scaling up inclusive education for children with disabilities in Cameroon.

A study on the impact of disability on school attendance in developing countries concludes that:

1. The average disability gap in school attendance stands at 30% in primary and secondary schools.
2. More than 85% of disabled primary-age children who are out of school have never attended school.
3. The average marginal effect of disability on primary and secondary school attendance is negative and significant (-30%).
4. Countries that have reached close to universal primary education report high ratios of disabled to non-disabled, out-of-school children.
5. Disabled children confront the same difficulties participating in education, regardless of their individual and socio-economic characteristics [3].

The World Health Organization (WHO) estimated in 2011 that 6.4% of children (0-14 years) in Africa live with a moderate to severe disability [4].

In 2013, a Plan International report on four West African countries found that children with disabilities were subject to discrimination at all levels of society. They reported that negativity stemmed from ideas about how children acquired their disabilities, with discussions often focusing on cultural, religious and historical beliefs about disability. They outlined that the type of impairment, its severity and the gender of the child were key factors influencing discrimination.

In terms of education, this discrimination against children with disabilities was also compounded by practical barriers, in which accessibility was restricted by the infrastructure of school buildings and the lack of teacher training for inclusive education [5].

In Cameroon, it has been reported that 35.1% of disabled children are experiencing some form of education, with 40.2% having primary education and 13.8% having secondary education. However, these figures do not reveal the type of disability or provide region-specific information [6].

A 2014 study conducted by Mactaggart et al (2014) found that children with disabilities in the Northwest Region of Cameroon were almost 20 times more likely to not be enrolled in school. For those who were attending school, the study also found that they were more likely to be in lower grades and three times more likely to have repeated a grade [7].

Within Cameroon, there are four government special needs primary schools: the Rehabilitation Institute for the Blind (Bulu Blind Center), the Borstal Institute for the Deaf, the 'Ecole des Sourds Yaounde' and the 'Ecole de l'Enfance' for children with mental health issues.

Religious and secular private schools have a higher number of establishments conducting inclusive education initiatives such as the Club des Jeunes Aveugles Réhabilités du Cameroun (CJARC), Promhandicam, Centre Privé de Formation des

Aveugles au Cameroun (CPFAM) and Orchidée Home. However, limited spaces mean that these schools cannot meet the high demand for pupil intake and also high fees make them inaccessible to lower income families [6]. Tohnain and Tamajong (2014) have also raised concerns about the ‘inadequacy’ of these specialist institutions across Cameroon, especially in relation to materials and human resources for the blind [8].

The cost and financing of inclusive education

The cost of inclusive education is generally considered by policy makers to be prohibitive in resource-poor settings; yet there is a paucity of evidence on the cost and financing of inclusive education, particularly in low- and middle-income countries.

Studies that are available were largely from high-income countries and published in the 1990s. It is important to acknowledge that support and management systems and funding mechanisms are critical to translate policy aspirations on inclusive education into practice. For example, in Ghana, the International Institute for Educational Planning (IIEP) reports that key challenges for making inclusive education a reality are related to lack of data and resources. These critical building blocks for effective policy implementation need to be further unpacked and strengthened [9].

However, the consensus that is emerging from the exiting literature is that inclusive education systems cost less to implement and maintain than special education models [10]. In addition, the cost of investing in inclusive education needs to be considered in view of the anticipated return of providing education for people with disabilities and the negative economic impact of excluding children with disabilities from education [11].

In West Africa, prior research conducted by Sightsavers on the cost of inclusive education in Senegal found that the average cost per child with a disability and per academic year was XOF 765,617 (USD 1,505). The study estimated that the scale up and roll-out of inclusive education for addressing the needs of children with blindness or visual impairment in Senegal would require an additional XOF 360,075,000 – 600,125,000 (USD 704,000 – 1,173,000) annually, which represented 0.2-0.34% of the primary education expenditure of Senegal in 2014 [12].

Another study by Handicap International in Burkina Faso and Togo estimated the cost per child with disability for the purchase of school supplies, equipment and technologies and teacher-student educational assessments at XOF 25,000 (approximately USD 44) per year. These expenditures can be 10-12 times higher for students with visual impairment (XOF 559,250) compared to those with language and hearing impairments (XOF 55,900) and motor impairments (XOF 44,200) respectively [13].

To our knowledge, there is currently no published study on the cost of inclusive education in Cameroon.

Aim and objectives of the study

The aim of this study is to contribute to the existing knowledge base on disability inclusion by investigating the costs and budget impact of inclusive education in Cameroon.

The specific objectives of the study are as follows:

- Determining the costs of making schools inclusive for children with disabilities, based on the pilot project implemented by Sightsavers and the government of Cameroon
- Analysing the budget impact of scaling up inclusive education at a national level from the budget holders' or payers' perspective (that is the government and its financial and technical partners including Ministry of Basic Education, Ministry of Social Affairs, local governments, schools, and NGOs).

The key research questions to be answered through this study include:

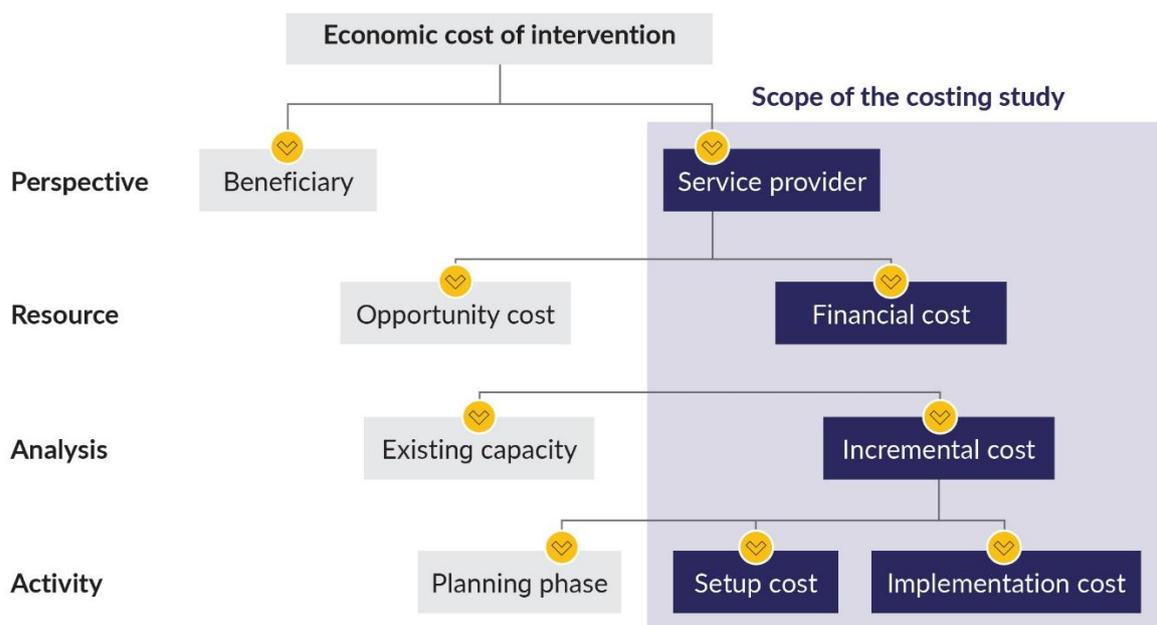
1. How much was spent for making schools inclusive for children with disabilities under the pilot project?
2. How were these expenditures distributed by type of inputs, project activities, and minimum standard activities? And what were the main expenditure drivers for each key component?
3. What would be the impact on the government budget of scaling up the inclusive education programme in primary schools, based on different scenarios?

Methodology

Approach

The study focuses on calculating the financial resources required for strengthening inclusive education and including children with disabilities in government mainstream primary schools. It consists of two parts: a retrospective cost study and a budget impact analysis (BIA), which is an economic assessment that estimates the financial consequences of rolling out or scaling up a new intervention.

Figure 1: Overview of costing approach



The cost study analyses the partners financial contributions to the pilot project. The cost analysis is conducted from the service providers perspective. This involves the identification and valuation of all resources consumed in the intervention, including infrastructure, changes in schools, equipment and material, staff time and training, and transport of children with disabilities. The cost analysis computes the actual expenditures of the pilot project (including project management costs and overheads) and the standard costs based on a set of minimum standard activities defined during the capitalisation exercise.

The budget impact analysis is carried out over a nine-year time horizon, using modelling techniques and two distinct scenarios for rolling out and scaling up inclusive education in Cameroon. The analytic and computing framework (model) was developed in adherence with the ISPOR Task Force’s guidelines for budget impact analysis [14] and IIEP/UNESCO’s methods and techniques for education sector planning and budgeting [15].

Data collection and management

The study was conducted retrospectively and used predominantly secondary data consisting of routine expenditure and output data from the inclusive education pilot project, covering four years of project implementation (from 2017 to 2020).

Data were mainly obtained from accounting and project databases held at Sightsavers’ Country Office and within the relevant departments at the Ministry of Basic Education, Ministry of Social Affairs, local governments, and pilot schools in Cameroon. Expenditure data were extracted from Sightsavers’ accounting system and additional financial information was obtained from financial reports and records collected from implementing partners of the pilot project.

The project's output and outcome data, such as number of children with disabilities enrolled in the demonstration schools, the transition/repetition and dropout rates for children with disabilities, the type and costs of assistive devices provided, the type and number of persons trained (parents, teachers, social workers, education sector cadres, local government, and civil society members), were collected from implementing partners or gathered from project reports and records.

Demographic and education sector data (including primary school-aged population, enrolment rate at schools, number of schools, prevalence, and type of disability) and other non-financial data needed for the budget impact analysis were collected from Cameroon and Ministry of Basic Education (MINEDUB) statistical yearbooks and other datasets or papers accessible from public repository (census, disability surveys, etc).

Secondary data were complemented by information collected from selected key stakeholders, including project staff, government officials from MINEDUB and Ministry of Social Affairs (MINAS) at both central and regional levels. And staff from local governments and demonstration schools supported by the inclusive education pilot project in the Central and Far North regions in Cameroon.

Data analysis was carried out using Excel and comprised of:

- Reviewing project and partners actual expenditures (including data cleaning and reconciliations)
- Carrying out a cost composition analysis by ventilating expenditures according to project activity, input categories, and minimum standard activities
- Identification of the main cost drivers for inclusive education by assessing inputs and cost for each activity against the total cost of pilot project
- Mathematical modelling and developing a spreadsheet-based tool for calculating the resources required for scaling up inclusive education at national and regional level

Cost analysis

The analysis generated two sets of costs:

1. Actual costs by reviewing of expenditures linked to implementation of the pilot project (including expenditures covered by Sightsavers and other implementing partners)
2. Standard costs based on guidelines / minimum quality standards set for inclusive education in Cameroon

Actual costs

Actual costs are calculated by reviewing cash expenditure for the implementation of the pilot project between 1 January 2017 and 31 December 2020, including all expenditures covered by Sightsavers' budget and financial contributions made by other project partners (such as Ministry of Education, Ministry of Social Affairs, and other financial and technical partners)¹. Expenditures are allocated to specific project activities and results based on the theory of change and logical framework of the project.

Standard costs

Standard costs are computed using the minimum standard activities that were developed as part of the pilot project capitalisation process in Cameroon. Expenditures for pilot project activities that are not included in the minimum standard activities, or project management and overhead costs, were not accounted for in the standard costs.

Key cost drivers for inclusive education are identified by cross-tabulating and calculating the percentage of project expenditure according to minimum standard activities and the type of inputs (personnel, building, equipment, etc.).

Budget impact analysis

A model was developed in excel to calculate the funding requirements for scaling up inclusive education in government primary schools in Cameroon. The time horizon considered for the budget impact analysis is nine years (2022-2030)².

The main characteristics of the model for the budget impact analysis are summarised below in Table 1.

The budget impact analysis estimates the funding requirements for scaling up inclusive education to other government primary schools and regions in Cameroon. The cost projections are based on two distinct scenarios that were established in consultation with the inclusive education project team. For each scenario, a distinct set of key variables is used for the cost projection, including the number of inclusive schools, number of new entrants and children with disabilities enrolled in inclusive schools, number of teachers to be trained, etc.

¹ Specific financial contributions of local governments and demonstrations schools for the implementation of the inclusive education project were not included in the analysis due to the lack of reliable data and recording system.

² In line with the anticipated implementation period of the next education sector strategic plan in Cameroon (which is currently being elaborated).

The BIA only considered minimum standard activities as defined during the pilot project capitalisation exercise, and standard unit costs were assumed to be constant over the period considered in the analysis.

The number of primary school age children (6-11 years) and number of new admissions in primary schools (in the Language Initiation Section (SIL) / Class 1 (CL1) for children aged 6) were projected from the year 2019 based on past trends (using historical data from 2015 to 2018). Projected values were obtained by using the *prevision.ets* function in excel³. A similar approach was applied to obtain the number of government primary schools and teachers in the public sector for each year.

The prevalence of disability among primary school-aged children was extrapolated from the prevalence of disability in the age group 0-17 years and reported functional limitations and clinical impairment data from the North West Cameroon Disability Study.

Enrolment and progression rates for children with disabilities in inclusive primary schools were projected using a flow model and followed UNESCO's International Institute for Educational Planning (IIEP) technical guidelines [16].

A flow model is a simulation model based on the analysis of enrolment data by grade, including promotion, dropout, and repetition rates. Data on flow rates for children with disabilities in inclusive primary schools were obtained from the four demonstration schools supported by the inclusive education pilot project. The flow rates (measuring the number of school children flowing from one grade to the next one) for children with disabilities were assumed to be the same for all six grades and to remain constant over time.

Ethical considerations

Ethical clearance for the study was obtained from the National Ethical Committee of Research for Human Health in Cameroon.

³ The *prevision.ets* function uses an exponential smoothing algorithm (ETS) to calculate future values based on historical values.

Table 1: Budget impact analysis model characteristics

Perspective	Budget holder / Payers (Ministry of Basic Education, Ministry of Social Affairs, local governments, and partners)
Target population	Children with disabilities of primary school age (6-11 years)
Time horizon	9 years (2022-2030)
Intervention mix	Minimum standard activities
Model outputs	New entrants enrolled in government primary schools (children with disabilities aged 6) School years completed by children with disabilities Budgetary requirements (per year and per region)
Unit costs	Standard costs derived from expenditure analysis (actual costs from pilot project and four demonstration schools in Central and Far North Region)
Analytical framework	The computing framework was developed as an excel spreadsheet with four sub models: Cost sub model: for computing standard unit costs and classifying costs (as capital, start-up or recurrent costs) Population sub model: for projecting population growth by region and age group, and calculating the number of primary school-age children with disabilities in need of inclusive education (target population) over the period of interest Pupil sub model: for calculating the number of new entrants and the number of children with disabilities enrolled in inclusive schools each year (using a flow model to assess the progression of children with disabilities across all six grades) School and teacher sub model: for projecting the number of teachers and primary schools in the government sector by year and for each region
Data sources	The main sources of information to define the model parameters were: Routine data from inclusive education pilot project Cameroon statistical yearbook (2019) MINEDUB statistical yearbook (2018/19) The North West Cameroon Disability Study Country Report, International Centre for Evidence in Disability (ICED), London School of Hygiene and Tropical Medicine, 2014 Mactaggart, I., Kuper, H., Murthy GVS, Oye J., and Polack, S. (2016) Measuring Disability in Population Based Surveys: The Interrelationship between Clinical Impairments and Reported Functional Limitations in Cameroon and India. PLOS ONE 11(10): e0164470

Findings

Cost analysis

Analysis of pilot project expenditure (actual costs)

As indicated in Table 2, the total expenditure of the pilot was XAF 300,502,951 (USD 523,425) over four years (2017-2020)⁴. Annual expenditures for the project ranged between XAF 12.5 million (year 1) and XAF 114.5 million (year 3) over the study period (respectively USD 21,551 and USD 192,371). The first year of project implementation was mainly focused on start-up activities in the three regions initially supported by the project⁵ (start-up workshops, planning activities, etc.). Expenditure gradually increased each year with the roll out of project activities and as more children with disabilities were enrolled in the demonstration schools (until 2020 and the start of the COVID-19 pandemic).

Expenditure for project activities at school and community level amounted to XAF 13,420,678 (USD 23,354) per school per year and XAF 88,294 (USD 154) per child with a disability per year on average (for the four demonstration schools). In addition, project expenditure for activities related to the promotion and strengthening of inclusive education in Cameroon amounted to XAF 25.8 million (USD 45,212) and project management and overheads expenditure were close to XAF 60 million (USD 104,547) over the same period.

Table 2: Annual pilot project expenditures by year (XAF and USD)

Year	XAF	USD	%
2017	12,539,767	21,551	4%
2018	79,067,482	145,298	26%
2019	114,451,570	192,371	38%
2020	94,444,132	164,205	31%
Total	300,502,951	523,425	100%

A detailed breakdown of expenditure by project components and activities is provided in Table 3.

⁴ These figures also include project management and overhead costs as well as expenditure for activities aimed at promoting and strengthening inclusive education at national level (e.g. support to the elaboration of an inclusive education policy, strengthening and developing existing advocacy coalitions, providing support to the inter-ministerial platforms on inclusive education at national and regional level, revisions of the national teacher-training curriculum for teachers training colleges and universities, etc.).

⁵ The project initially supported inclusive schools in three regions including the Southwest, Central and Far North. In 2018, project implementation and support to three demonstration schools in the Southwest region was interrupted due to the political crisis and conflict in the anglophone regions of Cameroon.

Table 3: Breakdown of pilot project expenditure by activity (XAF)

Description		2017	2018	2019	2020	Total	%
Costs for outputs and activities							80%
Outcome 1: Boys and girls with disabilities are included in selected pilot primary schools in Cameroon							20%
Output 1.1	Men and women trained to support the inclusion of children with disabilities	-	-	11,145,591	90,000	11,235,591	4%
Activity 1.1.1	Train social workers to provide social support to children enrolled	-	-	11,145,591	90,000	11,235,591	4%
Output 1.2	School environments are inclusive for children with disabilities	930,744	8,802,659	18,963,550	19,200,271	47,897,225	16%
Activity 1.2.1	Conduct a gender and disability assessment through a participatory study	-	1,758,580	5,476,450	8,393,275	15,628,305	5%
Activity 1.2.2	Identify children with disabilities to be enrolled in pilot schools	480,700	-	-	-	480,700	0%
Activity 1.2.3	Provide medical assessment for children	-	1,427,129	2,142,000	6,827,300	10,396,429	3%
Activity 1.2.4	Develop and implement a mentoring programme	-	213,950	5,032,300	1,058,531	6,304,781	2%
Activity 1.2.5	Promote home-based educational support and tutoring for children with disabilities	-	1,366,000	4,217,450	2,921,165	8,504,615	3%
Activity 1.2.8	Support rehabilitation and learning of children with specific educational needs	-	500,000	733,000	-	1,233,000	0%
Activity 1.2.10	Conduct an accessibility audit and facilitate refurbishment in the 4 pilot schools	450,044	3,537,000	1,362,350	-	5,349,394	2%
Outcome 2: Civil society and government structures support the inclusion of children with disabilities in selected primary schools in the Centre and Far North Regions of Cameroon							15%
Output 2.1	Civil society members are trained on the rights of children with disabilities	-	11,257,881	4,110,500	2,581,871	17,950,252	6%
Activity 2.1.1	Build the capacities of the OPD Platform in IE	-	2,519,881	-	-	2,519,881	1%
Activity 2.1.2	Sensitise and mobilise community leaders and organisations in 4 pilot areas	-	7,356,000	2,079,000	711,500	10,146,500	3%
Activity 2.1.3	Undertake capacity building of locally based structures	-	751,000	826,500	833,000	2,410,500	1%
Activity 2.1.4	Support and creation of an inclusive education team in each pilot school	-	631,000	1,205,000	1,037,371	2,873,371	1%
Output 2.2	Government members are trained on the rights of children with disabilities	-	12,977,221	12,007,765	854,000	25,838,986	9%
Activity 2.2.2	Support the development and implementation of an IE policy for Cameroon	-	3,000,000	7,862,415	794,000	11,656,415	4%
Activity 2.2.4	Provide support to the inter-ministerial and multi-sector platforms on IE at national and regional levels	-	4,555,266	3,575,000	-	8,130,266	3%
Activity 2.2.5	Strengthen/develop existing advocacy coalitions	-	5,421,955	570,350	60,000	6,052,305	2%
Outcome 3: Selected schools in the project area are strengthened to support disability mainstreaming and quality inclusive education							46%

Description		2017	2018	2019	2020	Total	%
Output 3.1	Education personnel completed inclusive education training in project area	-	34,886,613	62,160,224	40,540,938	137,587,776	46%
Activity 3.1.3	Train support teachers and inspectors of the 4 pilot school areas on medium of communication (braille, sign language) in the special schools	-	19,689,950	9,323,720	11,929,400	40,943,070	14%
Activity 3.1.4	Support continuous professional development for in-service teachers	-	4,371,869	2,216,875	7,088,440	13,677,184	5%
Activity 3.1.6	Collaboratively revise the national teacher-training curriculum for teachers training colleges and universities	-	-	2,312,000	9,638,369	11,950,369	4%
Activity 3.1.7	Advocate the MINESEC to duplicate IE resource centre	-	1,910,000	1,430,000	-	3,340,000	1%
Activity 3.1.8	Build capacities of education actors through seminar and exchange of experience	-	5,185,114	3,071,254	1,462,330	9,718,698	3%
Activity 3.1.10	Train teachers of the 4 demonstration schools	-	3,729,680	3,492,500	10,422,400	17,644,580	6%
Activity 3.1.12	Train teachers within 48 pilot inclusive education project area using a light touch set of modules on inclusive education and child safeguarding	-	-	40,313,875	-	40,313,875	13%
Project management and overhead costs							20%
Costs of monitoring, evaluation and learning		2,345,503	8,881,985	5,335,382	2,447,688	19,010,558	6%
QSATs		810,273	-	-	-	810,273	0%
Monitoring visits		1,535,230	2,725,275	4,012,616	1,013,750	9,286,871	3%
Partner learning workshops		-	6,156,710	1,322,766	1,034,901	8,514,377	3%
Other learning initiatives		-	-	-	399,037	399,037	0%
Costs of oversight and cross cutting		9,263,519	2,261,123	728,558	28,729,364	40,982,564	14%
Staff costs		8,500	-	293,250	23,370,794	23,672,544	8%
Travel and transportation		843,040	-	-	-	843,040	0%
Office costs		1,840	330,657	435,308	5,016,070	5,783,875	2%
Communication costs		-	-	-	342,500	342,500	0%
Programme specific costs		-	962,666	-	-	962,666	0%
Start-up workshop		7,997,389	-	-	-	7,997,389	3%
Planning and coordination meetings		412,750	967,800	-	-	1,380,550	0%
TOTAL		12,539,767	79,067,482	114,451,570	94,444,132	300,502,951	100%

Referring to the project theory of change and logical framework, nearly half of the expenditure (46%) was devoted to providing inclusive education training to the education personnel to support the mainstreaming of, and ensuring the quality of, inclusive education (outcome 3).

It is estimated that 20% was focussed on improving the school environment and community support for the inclusion of children with disabilities in the pilot schools (outcome 1), and 15% to train civil society and government structures to support the inclusion of children with disabilities in pilot schools (outcome 2).

Project management and overhead costs represented a fifth (20%) of project expenditure. In terms of output and activities, the largest share of expenditure related to output 3.1 “Completion of inclusive education training to education personnel” (46%). This included training in special schools of teachers and inspectors from the four demonstration schools on communication, including braille and sign language (14%) and training of teachers on inclusive education and child safeguarding (13%).

As shown in Table 4, nearly half (47%) of pilot project actual costs are expenditures for personnel, including fees, indemnities and per diem for technical assistants and stakeholders participating in trainings and project activities. Other key expenditures are related to meals, accommodation, and venue rentals for the organisation of workshops or meetings (25%); transportation for project staff or stakeholders (11%); and various services provided by subcontractors, including medical and rehabilitative services, media, printing, translation, etc. (10%).

Building costs comprise of minor rehabilitation and accessibility work in the four demonstration schools (2%). As for equipment (1%), the expenditures are associated to the purchase of assistive devices for children with disabilities by the project (in addition to the assistive devices already procured by the local government authorities)⁶.

Table 4. Breakdown of project expenditure by type of inputs, 2017-2020 (XAF)

Inputs	XAF	USD	%
Personnel	142,664,867	247,806	47%
Meals, accommodation, venue rentals	75,232,540	131,100	25%
Transportation	34,329,811	59,690	11%
Services	30,813,918	54,134	10%
Material and supplies	8,405,966	14,677	3%
Buildings	5,011,350	8,881	2%
Equipment	2,159,500	3,783	1%
Others	1,885,000	3,354	1%
Total	300,502,951	523,425	100%

⁶ The contribution of local government and was not taken into account in the project expenditure analysis due to the lack of data (as indicated in the methodology)

Analysis of minimum standard costs

Standard costs are calculated (see Table 5) based on the minimum standards for inclusive education as established following the capitalisation exercise of the pilot project. The majority (59%) of the standard costs in the pilot project are related to the training and continuing professional development, including training of teachers and education cadres (36%) and the support for the work of inclusion champions (23%). This is followed by community sensitisation and mobilisation activities (14%); medical and social services for children with disabilities (11%); elaboration of technical content such as didactic material, training modules and manuals (9%); monitoring and evaluation of learning achievements and social participation of children with disabilities (5%); and ensuring the environment and organisation in schools is adapted for children with disabilities (3%).

The identification and orientation of children with disabilities in the community represents less than 1% of costs as it involved volunteers from local based and community organisations. Standard costs represent 72% of pilot project expenditures in total, while 28% are expenditures for activities that are not included in the minimum standards. The latter include expenditures that are project specific, and activities related to the promotion and strengthening of inclusive education at national or regional level (such as developing a national inclusive education policy, supporting interagency platforms, advocacy, etc.).

Table 5. Expenditures allocated to minimum standard activities, 2017-2020

#	Minimum Standards	XAF	USD	%
1	Community sensitisation and mobilisation	31,159,186	54,791	14%
2	Identification/orientation of children with disabilities	480,700	826	0.2%
3a	Medical services	10,336,429	17,988	5%
3b	Social services	11,968,591	20,426	6%
4	Environment	5,909,394	10,434	3%
5	Child protection and gender ⁷	-	-	-
6	Inclusion champions	50,708,525	89,050	23%
7a	Training and continuing professional development of teachers and cadres in the education system	77,511,584	134,026	36%
7b	Elaboration of didactic material, modules, manuals	18,755,150	32,414	9%
8	Monitoring and evaluation	10,585,886	18,398	5%
	Minimum standards (total)	217,415,445	378,353	100%
	Not included in minimum standards	83,087,506	145,072	
	Total	300,502,951	523,425	

⁷ Child protection and gender are transversal themes and related activities were accounted for in the other minimum standards as it is not always possible to distinguish these expenditures from other standard activities.

Table 6 highlights the key drivers of the pilot intervention by presenting expenditures by inputs and as a percentage of total minimum standard expenditures.

The main cost drivers are associated with personnel costs and meals, accommodation and venue rental expenditures for the training and continuing professional development of teachers and cadres in the education system, and inclusion champions, which together account for nearly half of minimum standard costs (49%).

Personnel costs and meals, accommodation and venue rental costs for the training and continuing professional development of teachers and education cadres are respectively 19% and 13% of the minimum standard costs, and 11% and 6% for the training and support for the work of inclusion champions.

Training activities on inclusive education focused on teachers and inspectors and included modules on disability, gender, child protection, IE general concept, and pedagogy. The aim is ensuring strategies are adapted to meet the learning needs of children with disabilities and result in an increase in progression and transition rates of the children. For inclusion champions, costs related mainly to the provision of advanced training on inclusive education and home-based support activities for children with disabilities.

Table 6. Key drivers of minimum standards costs, 2017-2020

Categories	Personnel	Meals, accommodation and venue rental	Services	Transport	Materials and supplies	Building	Equipment	Others	Total
7a. Training for teachers/cadres	19%	13%	2%	2%	1%	0%	0%	0%	36%
6. Inclusion champions	11%	6%	2%	4%	1%	0%	0%	0%	23%
1. Community sensitisation and mobilisation	3%	3%	5%	2%	1%	0%	0%	0%	14%
7b. Elaboration of didactic material, modules, manuals	5%	1%	1%	2%	0%	0%	0%	0%	9%
3b. Social services	3%	2%	0%	0%	0%	0%	0%	0%	6%
8. Monitoring and evaluation	2%	2%	0%	0%	1%	0%	0%	0%	5%
3a. Medical services	1%	0%	2%	1%	0%	0%	1%	0%	5%
1. Environment	0%	0%	0%	0%	0%	2%	0%	0%	3%
2. Identification of children with disabilities	0%	0%	0%	0%	0%	0%	0%	0%	>0%
Total minimum standards⁸	44%	27%	11%	10%	3%	2%	1%	1%	100%

⁸ The percentages indicated here are for minimum standard costs and differ from Table 4 since the latter concerns actual costs

The identification of the main cost drivers in the pilot project is useful to help devise strategies to reduce the overall cost of implementing a future inclusive education programme at scale. As suggested by MINEDUB, integrating IE modules in the initial curriculum, or in the trainings of teachers conducted by inspectors during pedagogic weeks, and/or using halls at inspectorates or schools for IE refresher training sessions, could lead to substantial savings on personnel costs and meals, accommodation and venue rental costs compared to the strategy adopted in the pilot project. These expenditures together accounted for 32% of the minimum standard activity costs in the pilot.

Budget impact analysis

Budget impact and projected outcomes by scenario

As indicated in Table 7, the overall budget impact and projected outcomes of rolling out inclusive education nationally are calculated for two distinct scenarios, each for the period 2022-2030 (9 years).

In scenario 1, the inclusive education pilot initiative is extended to 428 government primary schools in Cameroon from 2022 and is continued in all 428 schools thereafter⁹.

The overall budget impact for scenario 1 is projected to be approximately XAF 27.8 billion (USD 47.7 million), resulting in a total of 52,850 children with disabilities aged 6 starting primary school, and 231,127 school years completed by children with disabilities across all grades over the period 2022-2030. It translates to an average unit cost of XAF 7,228,725 (USD 12,387) per inclusive school per year and XAF 120,475 (USD 206) per school year completed by children with disabilities.

In scenario 2, inclusive education is rolled out in all government primary schools in Cameroon (reaching a total of 15,324 inclusive schools in 2030)¹⁰. The overall budget impact for this scenario is close to XAF 735.6 billion (USD 1.26 billion) over the period 2022-2030, resulting in a total of 344,072 children with disabilities aged 6 starting primary school and 1,401,942 school years completed by children with disabilities across all grades. The average unit cost is XAF 5,333,704 (USD 9,139) per inclusive school per year and XAF 524,710 (USD 899) per school year completed by children with disabilities¹¹.

⁹ One demonstration school at regional (10) and division (58) levels and in each sub-division (360) for a total of 428 schools in line with the current goal set by the government.

¹⁰ Government primary schools in Cameroon are projected to increase from 13,792 schools in 2022 to 15,324 by 2030 as new schools are built to accommodate the growing number of school age children (based on past trends and considering the anticipated population growth in Cameroon).

¹¹ The unit cost per inclusive school / year is lower and the cost per school year completed by children with disabilities is higher than for scenario 1. It can be explained by economies of scale for the former and the lower number of children with disabilities per school for the latter (on average 60 children with disabilities enrolled per inclusive school / year in scenario 1 versus 10 for scenario 2).

Extrapolating these results to the population in Cameroon, it is estimated that scenarios 1 and 2 would address respectively 12% and 72% of the need for inclusive education among children with disabilities of primary school age in Cameroon¹².

Table 7: Projected budget impact and outcomes, 2022-2030 (XAF and USD)

Category	Scenario 1	Scenario 2
Number of inclusive schools (2030)	428	15,324
Number of new entrants (children with disabilities starting in SIL / Grade 1 only)	52,850	344,072
Number of school years (children with disabilities only, all grades)	231,127	1,401,942
% of estimated need addressed for children with disabilities (in school years)	12%	72%
Overall budget impact for 2022-2030 (XAF)	27,845,049,859	735,612,603,290
Average budget impact per year (XAF)	3,093,894,429	81,734,733,699
Average cost per inclusive school / year (XAF)	7,228,725	5,333,704
Average cost per school year for children with disabilities (XAF)	120,475	524,710
Overall budget impact for 2022-2030 (USD)	47,713,246	1,260,492,103
Average budget impact per year (USD)	5,301,472	140,054,678
Average cost per inclusive school / year (USD)	12,387	9,139
Average cost per school year for children with disabilities (USD)	206	899

¹² The need for inclusive education for children with disabilities of primary school age (6-11 years) in the population in Cameroon is estimated to 1,938,181 school years between 2022-2030.

Budget impact of minimum standard activities

The breakdown of projected costs according to minimum standard activities is provided for each scenario in Table 8.

For scenario 1, projected costs are mainly related to minimum standard activities for inclusion champions (essentially for the training of inclusion champions in each school and the provision of home-based support to children with disabilities) for a total of XAF 16.35 billion (USD 28.0 million), which represents 59% of the overall budget impact over the period.

This is followed by monitoring and evaluation activities, consisting of quarterly review meeting of inclusion team and individual evaluation plans for children with disabilities (XAF 3.31 billion, USD 5.7 million); health services for children with disabilities including medical/rehabilitation services and provision of assistive devices (XAF 3.15 billion, USD 5.4 million); the training and capacity building of teachers and cadres in the education system (XAF 2.67 billion, USD 4.57 million); and sensitisation and mobilisation at community level (XAF 1.66 billion, USD 2.85 million). The other minimum standard activities accounted for XAF 695 million (USD 1.19 million), or 2.5% of the total projected costs for the period 2022-2030.

For scenario 2, projected costs are mainly related to: inclusion champions for a total of XAF 556.8 billion (USD 954 million) or 76% of the overall budget impact over the period; and monitoring and evaluation activities (XAF 112.74 billion, USD 193.2 million) corresponding to 15% of the total budget impact. The remaining minimum standard activities account together for XAF 66.1 billion (USD 113.2 million) or 9% of the total projected costs for the period 2022-2030. There is no need to train other teachers in the subdivision on inclusive education in this scenario since all government primary schools in Cameroon are targeted and teachers in inclusive schools will receive appropriate training.

Table 8: Breakdown of projected costs by minimum standard activity, 2022-2030 (XAF and USD)

Standard	Activity	XAF		USD	
		Scenario 1	Scenario 2	Scenario 1	Scenario 2
1. Sensitisation and mobilisation at community level	Sensitisation of deconcentrated / decentralised structures and councils	266,055,500	266,055,500	455,893	455,893
	Sensitisation in community (population, community leaders, etc.)	1,085,675,500	1,085,675,500	1,860,334	1,860,334
	Sensitisation of locally based associations	310,073,267	310,073,267	531,319	531,319
	Sub-total standard	1,661,804,267	1,661,804,267	2,847,547	2,847,547
2. Identification and orientation of children with disabilities	Sub-total standard	51,434,900	1,841,585,339	88,135	3,155,606
3a. Health services	Provision of spectacles / low vision devices	4,189,329	27,273,995	7,179	46,735
	Provision of hearing aids	18,966,544	123,478,815	32,500	211,584
	Provision of wheelchairs / tricycles	6,423,638	41,820,125	11,007	71,660
	Other devices for mobility (crutches, orthopaedic shoes / sole, etc.)	12,623,846	82,185,638	21,631	140,827
	Medical and rehabilitative services for children with disabilities	3,108,398,227	18,854,578,307	5,326,324	32,307,830
	Sub-total standard	3,150,601,583	19,129,336,881	5,398,641	32,778,636
3b. Training social workers	Sub-total standard	11,235,591	11,235,591	19,252	19,252
4. Environment	Accessibility audits	48,154,736	1,724,141,691	82,514	2,954,363
	Refurbishment / renovation work	59,920,000	2,145,387,539	102,675	3,676,180
	School equipment and amenities for children with disabilities	42,800,000	1,532,419,670	73,339	2,625,843
	Construction and renovation work to improve accessibility	481,430,450	17,237,231,111	824,944	29,536,462
	Sub-total standard	632,305,186	22,639,180,011	1,083,472	38,792,848
6. Inclusion champions	Constitution of inclusion teams	38,581,143	1,381,366,874	66,110	2,367,010
	Elaboration of child protection plan	8,676,630	310,659,778	14,868	532,324
	Training inclusion champions	13,190,875,470	448,682,879,097	22,602,922	768,830,256
	Purchase motorbike (1 per school)	256,800,000	9,194,518,023	440,034	15,755,055
	Home-based support for children with disabilities	2,857,980,165	97,213,166,158	4,897,226	166,577,391
	Sub-total standard	16,352,913,408	556,782,589,929	28,021,160	954,062,036
7a. Training and capacity building of teachers and cadres in the education system	Improvement of partnerships and exchanges between teachers	128,774,517	128,774,517	220,659	220,659
	Development of partnership with specialised schools	50,100,000	50,100,000	85,848	85,848
	Training of all teachers on IE fundamentals in subdivision	1,877,484,060	-	3,217,120	-
	Training of all teachers in inclusive schools	613,786,940	20,622,751,396	1,051,741	35,337,643
	Sub-total standard	2,670,145,518	20,801,625,913	4,575,367	35,644,149
8. Monitoring and evaluation	Quarterly review meetings inclusion team/individual evaluation plans	3,314,609,406	112,745,245,359	5,679,673	193,192,029
	Sub-total standard	3,314,609,406	112,745,245,359	5,679,673	193,192,029
TOTAL		27,845,049,859	735,612,603,290	47,713,246	1,260,492,103

Annual budget impact

Details on the annual budget requirements and figures under each scenario are provided in Table 9 and 10. The initial year of implementation has the highest budget impact in both scenarios considering the initial investments to be made in terms of sensitisation and mobilisation at community level in each subdivision; the identification of children with disabilities in pilot schools and the surrounding community; construction work to improve school accessibility and environment for children with disabilities; and the training of social workers, inclusion champions, teachers and education cadres in inclusive education.

For scenario 1, the annual budget impact reaches 7.14 billion XAF (12.24 million USD) in the initial year of implementation and is close to 2.59 billion XAF (4.44 million USD) for the subsequent years. Similarly, for scenario 2, the annual budget impact is the highest for the initial year (105.55 billion XAF or 180.87 million USD) and increases gradually from 73.94 billion XAF (126.70 million USD) and 83.12 billion XAF (142.43 million USD) between 2023 and 2030¹³.

¹³ The projected annual cost increases gradually for scenario 2 since the number of inclusive government primary schools is projected to increase from 13 792 (in 2022) to 15 324 (in 2030) as new schools are constructed to accommodate the growing number of school age children in Cameroon (projections are based on past trends).

Table 9: Projected annual costs for Scenario 1 (XAF)

Categories	Scenario 1									
Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
Regions										10
Subdivisions										428
Inclusive schools										428
Enrolment (all children with disabilities)	25,680	25,680	25,680	25,681	25,682	25,682	25,680	25,682	25,679	231,127
New entrants (all children with disabilities)	25,680	1,157	1,157	1,157	1,158	1,157	8,698	7,818	4,868	52,850
New entrants - moderate VI	69	3	3	3	3	3	23	21	13	142
New entrants - severe VI	13	1	1	1	1	1	4	4	2	26
New entrants - severe hearing loss	42	2	2	2	2	2	14	13	8	87
New entrants - moderate MSI	307	14	14	14	14	14	104	93	58	631
New entrants - severe MSI	27	1	1	1	1	1	9	8	5	56
Number of teachers in inclusive schools										2,158
Minimum standard activities	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
1. Sensitization and mobilization at community level										
Sensitisation of deconcentrated / decentralised structures and councils	266,055,500									266,055,500
Sensitisation in community (population, community leaders, etc.)	1,085,675,500									1,085,675,500
Sensitisation of locally based associations	310,073,267									310,073,267
Sub-total standard 1	1,661,804,267									1,661,804,267
2. Identification and orientation of children with disabilities										
Identification of children with disabilities	51,434,900									51,434,900
Sub-total standard 2	51,434,900									51,434,900
3a. Medical services										
Provision of assistive devices										
Spectacles / low vision devices	2,035,610	91,713	91,713	91,713	91,793	91,713	689,476	619,720	385,878	4,189,329
Hearing aids	9,215,910	415,218	415,218	415,218	415,577	415,218	3,121,495	2,805,685	1,747,004	18,966,544
Wheelchairs / tricycles	3,121,268	140,627	140,627	140,627	140,749	140,627	1,057,196	950,237	591,680	6,423,638
Other devices for mobility	6,133,971	276,363	276,363	276,363	276,602	276,363	2,077,620	1,867,421	1,162,779	12,623,846

Categories	Scenario 1									
Medical and rehabilitative services for children with disabilities	345,367,659	345,370,930	345,374,054	345,377,038	345,393,335	345,395,450	345,369,517	345,389,836	345,360,406	3,108,398,227
Sub-total standard 3	365,874,418	346,294,853	346,297,977	346,300,960	346,318,056	346,319,372	352,315,304	351,632,898	349,247,747	3,150,601,583
3b. Social services										
Training of social workers	11 235 591									11 235 591
Sub-total standard 4	11,235,591									11 235 591
4. Environment										
Accessibility audits	48,154,736									48,154,736
Refurbishment / renovation work	59,920,000									59,920,000
School equipment and amenities for children with disabilities	42,800,000									42,800,000
Accessibility works	481,430,450									481,430,450
Sub-total standard 5	632,305,186	-	-	-	-	-	-	-	-	632,305,186
6. Inclusion champions										
Constitution of inclusion teams	38,581,143									38,581,143
Elaboration of child protection plan	8,676,630									8,676,630
Training inclusion champions	1,465,652,830	1,465,652,830	1,465,652,830	1,465,652,830	1,465,652,830	1,465,652,830	1,465,652,830	1,465,652,830	1,465,652,830	13,190,875,470
Purchase motorbike (1 per school)	256,800,000									256,800,000
Home-based support for children with disabilities	317,553,352	317,553,352	317,553,352	317,553,352	317,553,352	317,553,352	317,553,352	317,553,352	317,553,352	2,857,980,165
Sub-total standard 6	2,087,263,955	1,783,206,182	16,352,913,408							
7a. Training / capacity building of teachers and cadres in the education system										
Improvement of partnerships and exchanges between teachers	14,308,280	14,308,280	14,308,280	14,308,280	14,308,280	14,308,280	14,308,280	14,308,280	14,308,280	128,774,517
Development of partnership with specialised schools	5,566,667	5,566,667	5,566,667	5,566,667	5,566,667	5,566,667	5,566,667	5,566,667	5,566,667	50,100,000
Training of all teachers on IE fundamentals in subdivision	1,877,484,060									1,877,484,060
Training of all teachers in inclusive schools	68,198,549	68,198,549	68,198,549	68,198,549	68,198,549	68,198,549	68,198,549	68,198,549	68,198,549	613,786,940
Sub-total standard 7	1,965,557,555	88,073,495	2,670,145,518							
8. Monitoring and Evaluation										
Quarterly review meeting of inclusion team and review of Individual Evaluation Plans for children with disabilities	368,289,934	368,289,934	368,289,934	368,289,934	368,289,934	368,289,934	368,289,934	368,289,934	368,289,934	3,314,609,406
Sub-total standard 8	368,289,934	3,314,609,406								
Total cost	7,143,765,806	2,585,864,464	2,585,867,588	2,585,870,571	2,585,887,667	2,585,888,983	2,591,884,915	2,591,202,509	2,588,817,358	27,845,049,859

Categories	Scenario 2										
Refurbishment / renovation work	1,930.9	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.8	2,145.4
School equipment and amenities for children with disabilities	1,379.2	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	1,532.4
Accessibility works	15,514.1	215.4	215.4	215.4	215.4	215.4	215.4	215.4	215.4	215.4	17,237.2
Sub-total standard 5	20,376.1	282.9	282.9	22,639.2							
6. Inclusion champions											
Constitution of inclusion teams	1,243.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	1,381.4
Elaboration of child protection plan	279.6	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	310.7
Training inclusion champions	47,230.8	47,886.5	48,542.2	49,197.9	49,853.7	50,509.4	51,165.1	51,820.8	52,476.5		448,682.9
Purchase motorbike (1 per school)	8,275.4	114.9	114.9	114.9	114.9	114.9	114.9	114.9	114.9	114.9	9,194.5
Home-based support for children with disabilities	10,233.2	10,375.3	10,517.3	10,659.4	10,801.5	10,943.5	11,085.6	11,227.7	11,369.7		97,213.2
Sub-total standard 6	67,262.3	58,397.8	59,195.6	59,993.4	60,791.1	61,588.9	62,386.7	63,184.5	63,982.3		556,782.6
7a. Training / capacity building of teachers and cadres in the education system											
Improvement of partnerships and exchanges between teachers	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	128.8
Development of partnership with specialised schools	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	50.1
Training of all teachers on IE fundamentals in subdivision											-
Training of all teachers in inclusive schools	2,192.5	2,217.2	2,242.0	2,266.7	2,291.4	2,316.1	2,340.9	2,365.6	2,390.3		20,622.8
Sub-total standard 7	2,212.4	2,237.1	2,261.8	2,286.6	2,311.3	2,336.0	2,360.7	2,385.5	2,410.2		20,801.6
8. Monitoring and evaluation											
Quarterly review meeting of inclusion team and review of Individual Evaluation Plans for children with disabilities	11,868.2	12,032.9	12,197.7	12,362.5	12,527.2	12,692.0	12,856.8	13,021.6	13,186.3		112,745.2
Sub-total standard 8	11,868.2	12,032.9	12,197.7	12,362.5	12,527.2	12,692.0	12,856.8	13,021.6	13,186.3		112,745.2
Total cost	105,552.3	73,940.4	75,380.5	76,810.0	78,229.5	79,639.4	80,900.8	82,039.9	83,119.7		735,612.6

Budget impact analysis by region

The budget impact and projected outcomes were also calculated at subnational level using administrative, population and education sector data that are specific for each region (such as the number of subdivisions, the population of children in primary school age, the number of government primary schools or teachers). A summary of the results for each region is presented in Table 11.

For scenario 1, the overall budget impact for the period 2022-2030 varies between XAF 1.69 billion (USD 2.90 million) in the North Region and XAF 5.25 billion (USD 8.99 million) in the Central Region.

Table 21: Projected outcomes and budget impact by region, 2022-2030 (XAF and USD)

Region	Number of inclusive schools	Number of new entrants in SIL / CL1 (children with disabilities aged 6)	Number of primary school years completed by children with disabilities	Budget impact (XAF)	Budget impact (USD)
Scenario 1					
Adamawa	27	3,334	14,581	1,756,429,218	3,009,689
Central	81	10,002	43,741	5,248,677,443	8,993,751
East	38	4,692	20,520	2,473,710,790	4,238,770
Far North	54	6,668	29,161	3,519,904,670	6,031,452
Littoral	39	4,816	21,061	2,569,166,363	4,402,336
North	26	3,211	14,041	1,692,298,540	2,899,799
Northwest	42	5,186	22,681	2,721,942,646	4,664,122
West	49	6,050	26,459	3,210,542,398	5,501,351
South	34	4,199	18,363	2,188,399,854	3,749,882
Southwest	38	4,692	20,520	2,463,977,937	4,222,093
Total	428	52,850	231,127	27,845,049,859	47,713,246
Scenario 2					
Adamawa	1,238	22,336	90,673	57,632,347,344	98,754,587
Central	2,552	57,357	232,727	120,322,976,192	206,176,676
East	1,173	11,895	49,168	54,902,927,850	94,077,653
Far North	2,540	77,440	315,464	123,589,166,669	211,773,382
Littoral	842	40,515	164,696	43,704,558,283	74,888,943
North	2,167	45,728	186,400	98,257,268,263	168,366,488
Northwest	1,407	29,626	121,019	68,302,064,330	117,037,436
West	1,645	29,069	119,042	80,991,838,813	138,781,708
South	843	7,526	31,005	42,277,149,895	72,443,040
Southwest	918	22,580	91,749	45,632,305,651	78,192,191
Total	15,324	344,072	1,401,942	735,612,603,290	1,260,492,103

For scenario 2, the budget impact ranges from XAF 42.28 billion (USD 72.44 million) to XAF 123.59 billion (USD 211.77 million) for the South and Far North regions respectively. The expected outcomes in terms of number of inclusive schools, new entrants with disability in the Language Initiation Section (SIL) / class 1 and school years completed by children with disabilities also vary according to the region considered.

Table 12 shows the projected annual cost for each region over the period 2022-2030. For scenario 1, the annual budget impact ranges from XAF 434.4 million (USD 744,400) for the first year and XAF 157.2 million (USD 269,400) annual average for the following years in the North Region, to a maximum of XAF 1.35 billion (USD 2.31 million) for the first year and XAF 487.5 billion (USD 835,000) annual average for the next years in the Central Region.

For scenario 2, the budget impact ranges from XAF 6.40 billion (USD 10.96 million) in Littoral Region, to XAF 17.5 billion (USD 29.99 million) in Far North for the first year. Thereafter, it ranges from an annual average of XAF 4.44 billion (USD 7.61 million) in the South Region to an annual average of XAF 13.26 billion (USD 22.72 million) in the Far North.

Table 12: Projected annual cost of scaling up for each scenario by region, 2022-2030 (XAF million and USD million)

Region	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total (XAF)	Total (USD)	%
Scenario 1												
Adamawa	451.01	163.06	163.06	163.06	163.06	163.06	163.45	163.40	163.25	1,756.43	3.01	6%
Central	1,348.74	487.15	487.15	487.16	487.16	487.16	488.29	488.15	487.71	5,248.68	8.99	19%
East	634.54	229.74	229.73	229.74	229.74	229.74	230.27	230.21	230.00	2,473.71	4.24	9%
Far North	901.80	327.04	327.04	327.04	327.04	327.04	327.79	327.71	327.41	3,519.90	6.03	13%
Littoral	654.58	239.15	239.16	239.16	239.16	239.16	239.71	239.64	239.43	2,569.17	4.40	9%
North	434.44	157.12	157.13	157.12	157.12	157.12	157.49	157.45	157.31	1,692.30	2.90	6%
Northwest	699.87	252.59	252.58	252.59	252.58	252.59	253.17	253.11	252.87	2,721.94	4.66	10%
West	820.24	298.58	298.59	298.58	298.59	298.58	299.27	299.20	298.92	3,210.54	5.50	12%
South	565.08	202.77	202.77	202.77	202.77	202.78	203.25	203.20	203.01	2,188.40	3.75	8%
Southwest	633.46	228.66	228.65	228.65	228.66	228.66	229.19	229.13	228.92	2,463.98	4.22	9%
Total	7,143.77	2,585.86	2,585.87	2,585.87	2,585.89	2,585.89	2,591.88	2,591.20	2,588.82	27,845.05	47.71	100%
Scenario 2												
Adamawa	8,074.93	5,708.12	5,851.01	5,993.34	6,135.13	6,276.41	6,408.28	6,532.39	6,652.73	57,632.35	98.75	8%
Central	16,977.53	11,956.11	12,240.84	12,524.17	12,806.17	13,086.89	13,343.53	13,580.31	13,807.42	120,322.98	206.18	16%
East	7,864.12	5,496.46	5,608.76	5,720.44	5,831.53	5,942.06	6,046.95	6,147.26	6,245.36	54,902.93	94.08	7%
Far North	17,501.31	12,357.74	12,630.10	12,900.12	13,167.90	13,433.55	13,665.81	13,870.60	14,062.05	123,589.17	211.77	17%
Littoral	6,396.21	4,439.17	4,510.47	4,580.68	4,649.85	4,718.01	4,768.94	4,805.69	4,835.54	43,704.56	74.89	6%
North	13,135.45	9,488.17	9,825.86	10,162.13	10,497.03	10,830.64	11,144.44	11,441.96	11,731.58	98,257.27	168.37	13%
Northwest	10,035.70	6,957.91	7,056.60	7,154.28	7,251.00	7,346.78	7,429.56	7,501.66	7,568.57	68,302.06	117.04	9%
West	11,917.45	8,285.19	8,390.79	8,495.29	8,598.73	8,701.17	8,790.63	8,869.46	8,943.13	80,991.84	138.78	11%
South	6,759.09	4,533.26	4,508.21	4,482.80	4,457.06	4,430.99	4,401.44	4,369.04	4,335.26	42,277.15	72.44	6%
Southwest	6,890.55	4,718.27	4,757.81	4,796.75	4,835.12	4,872.95	4,901.20	4,921.56	4,938.09	45,632.31	78.19	6%
Total	105,552.33	73,940.41	75,380.46	76,810.00	78,229.51	79,639.44	80,900.78	82,039.94	83,119.73	735,612.60	1,260.49	100%

Conclusion

This study provides evidence on the cost and budget impact of scaling up inclusive education in government primary schools in Cameroon according to two distinct scenarios. Results show that the total expenditure of the pilot project was XAF 300.5 million (USD 523,425) over four years (2017-2020).

Nearly half of the pilot project expenditure (46%) was devoted to providing inclusive education training to the education personnel to support the mainstreaming of, and the quality of, inclusive education provision. It consisted of personnel expenditures (47%) including fees, indemnities and per diems for technical assistants and stakeholders participating in trainings and other project activities.

Expenditures for minimum standard activities amount to XAF 217.4 million (USD 378,353), or 72% of the total expenditure of the inclusive education pilot project. Key cost drivers are personnel costs and meals, accommodation and venue rental costs for training and continuing professional development (respectively 19% and 13% of the minimum standard costs for teachers and other education system cadres, and 11% and 6% respectively for the training and support for the work of inclusion champions).

Over the period 2022-2030, the overall budget impact of scaling up inclusive to 428 government primary schools (scenario 1) is close to XAF 27.83 billion (USD 47.7 million) and would result in a total of 52,850 children with disabilities aged 6 starting primary school, and 231,127 school years completed by children with disabilities across all grades. Over the same period, the budget impact of rolling out inclusive education in all government primary schools in Cameroon would amount to XAF 735.6 billion (USD 1.26 billion), resulting in a total of 344,072 children with disabilities aged 6 starting primary school and 1,401,942 school years completed by children with disabilities across all grades.

It is estimated that scenarios 1 and 2 would respectively address 12% and 72% of the need for inclusive education among children with disabilities of primary school age over the period 2022-2030.

The purpose of the study is to build evidence on the cost of providing inclusive education and to inform the planning and budgeting process for inclusive education in Cameroon. The costing study highlights the cost of critical activities and the key cost drivers. It therefore supports future work in identifying possible cost savings in the provision of inclusive education. This could include adopting strategies such as inspectors training teachers on inclusive education during pedagogic weeks, and/or privileging the use of venues at inspectorates or schools for trainings for the scale up of inclusive education in Cameroon that could lead to significant reductions in the costs associated with inclusive education provision.

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