

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PANAMA

EDUCATIONAL FACILITIES AND LEARNING QUALITY

(PN-L1064)

LOAN PROPOSAL

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ELECTRONIC LINKS	
REQUIRED	
1.	Annual work plan (AWP) http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35323291
2.	Monitoring and evaluation arrangements http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35341914
3.	Full Procurement Plan http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35323190
4.	Environmental and Social Management Report (ESMR) http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35323152
OPTIONAL	
1.	Panamá: Plan Estratégico de Gobierno 2010-2014 [Strategic government plan 2010-2014] http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35323760
2.	Education sector note http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35323755
3.	Results of academic achievement tests http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35323757
4.	Education Indicators and Indigenous Peoples in Panama (in English) http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35323759
5.	PREAL report: Necesitamos Aprender con Calidad [We need quality learning] http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35323758
6.	Improvement in learning outcomes http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35323756
7.	MEDUCA institutional capacity assessment http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35323754
8.	Planning, dimensioning, and cost-efficiency of infrastructure investments http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35345769
9.	Strengthening of education management in indigenous reserves (comarcas) http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35346542

ABBREVIATIONS

GDP	Gross domestic product
LIBOR	London Interbank Offered Rate
MEDUCA	Ministry of Education
MEF	Ministry of Economy and Finance
NCB	National competitive bidding
PREAL	Partnership for Educational Revitalization in the Americas
PRODE	Programa de Desarrollo Educativo [Educational Development Project]
SERCE	Segundo Estudio Regional Comparativo y Explicativo [Second Regional Comparative and Explanatory Study]
SIAFPA	Sistema Integrado de Administración Financiera de Panamá [Panamanian Integrated Financial Management System]
SINECA	Sistema Nacional de Evaluación de la Calidad Educativa [National Educational Quality Evaluation System]

PROJECT SUMMARY

PANAMA EDUCATIONAL FACILITIES AND LEARNING QUALITY (PN-L1064)

Financial Terms and Conditions					
Borrower: Republic of Panama Executing agency: Ministry of Education (MEDUCA)			Amortization period:		20 years
			Grace period:		48 months
			Disbursement period:		48 months
Source	Amount (US\$)	%	Interest rate:		LIBOR
IDB (Ordinary Capital)	30,000,000	92.58	Inspection and supervision fee:		*
Local	2,402,820	7.42	Credit fee:		*
Total	32,402,820	100.00	Currency:		U.S. dollars from the Single Currency Facility
Project at a Glance					
Project objective: The objective of this operation is to help improve access to and the quality of education in indigenous zones (comarcas). Its specific objectives are to: (i) improve learning outcomes in language and mathematics in the early grades; (ii) help improve the retention and flow of students to complete their compulsory basic education; and (iii) expand access opportunities to secondary education for students who complete basic education (paragraph 1.27).					
Special contractual clauses: The following are special conditions precedent to the first disbursement: (i) creation of the Project Office with the necessary staffing and the capacities needed to execute the project; (ii) entry into force of the program's Operating Manual; and (iii) formation of the program's Strategic Steering Committee (paragraph 3.9).					
Exceptions to Bank policies: None.					
Project consistent with country strategy: <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> </div>					
Project qualifies as: <div style="display: flex; justify-content: space-between; margin-top: 5px;"> SEQ <input checked="" type="checkbox"/> PTI <input type="checkbox"/> Sector <input type="checkbox"/> Geographic <input type="checkbox"/> Headcount <input type="checkbox"/> </div>					

* The credit fee and inspection and supervision fee will be established periodically by the Board of Executive Directors as part of its review of the Bank's lending charges, in accordance with the applicable provisions of the Bank's policy on lending rate methodology for Ordinary Capital loans. In no case will the credit fee exceed 0.75% or the inspection and supervision fee exceed, in a given six-month period, the amount that would result from applying 1% to the loan amount divided by the number of six-month periods included in the original disbursement period.

I. DESCRIPTION AND RESULTS MONITORING

A. Background, problem addressed, rationale

- 1.1 **The Panamanian school system** is regulated by the Ministry of Education (MEDUCA) and is divided into three levels. An initial level of general basic education, comprising a “preschool” year, six years of primary school, and three middle school years (from ages 5 to 14), is free of charge and compulsory. This is followed by secondary school lasting three years (from ages 15 to 17) which is free and diversified, but not compulsory. The total enrollment for these levels in 2009 was 815,000 students, of whom nearly 70% were in basic education. The third, or higher education, level consists of post-secondary, nonuniversity higher education, and university. Another feature of the system, as described below, is the existence of five indigenous comarcas, which account for 5% of total national enrollment.
- 1.2 Over the last 15 years, education spending in Panama averaged 5% of gross domestic product (GDP), 12% of the national budget, and over 25% of government social spending. In Latin America, Panama is one of the countries that invests most in education in relation to GDP, and its per-student spending is above average for the region.
- 1.3 The country has made substantial progress in terms of improving access to education and increasing the population’s years of schooling. It has universalized access to and graduation from primary school; and the average level of schooling of its labor force (nine years) is comparable to that of Chile or Costa Rica. Nonetheless, coverage challenges persist at the preschool (net coverage of 55%), and also at the middle school (67%) and secondary (24%) levels.
- 1.4 These low coverage rates reflect access-related issues as well as systemic quality problems and low internal efficiency. Half of all 3rd grade primary school students lag seriously behind in expected basic learning, which results in high failure rates that worsen at the middle and secondary school levels. Of every 100 students entering first grade, only 60 complete primary school without repeating a grade, and only one in three completes 9th grade on time.
- 1.5 Ultimately, less than half of school-leavers entering the labor force have completed secondary education, and at least half lack basic skills in Spanish and mathematics, as measured by standardized national tests (National Educational Quality Evaluation System - SINECA, 2008). Comparative results at the regional level (Second Regional Comparative and Explanatory Study - SERCE, 2006) rank Panama above only Guatemala and the Dominican Republic among participating countries, and well below other Latin American countries with similar income levels, such as Costa Rica or Chile.
- 1.6 Given this situation, the Panamanian government has requested support from the Bank to help it solve problems affecting basic and secondary education in indigenous comarcas, where education outcomes are the poorest.

- 1.7 **Education situation in indigenous comarcas.** Just over 10% of the Panamanian population belongs to one of the country's eight indigenous groups (see Table I-1): Ngöbe, Buglé, Kuna, Emberá, Wounaan, Bocota, Naso (Teribe), or Bri Bri.¹ Roughly half of these people live in indigenous comarcas,² but they are not limited to them.

Table I-1 Population by Type of Residence Zone, 2008

Population	Urban	Rural and nonrural comarca	Rural and comarca	Total
Nonindigenous	2,053,316	894,996	9,506	2,957,818
Indigenous	88,993	100,054	187,422	376,468
Total	2,142,309	995,050	196,928	3,334,287

Source: Indicators of education and indigenous peoples in Panama, IDB.

- 1.8 Education indicators reveal sharp differences between indigenous and nonindigenous peoples in Panama. For example, 34.5% of indigenous people are considered illiterate, compared to a national average of 5.1%. The situation is even worse when gender differences are considered: indigenous women have an average of three years' approved studies, compared to 8.6 years among nonindigenous men (nearly 3 times higher). The 2007 report of the Partnership for Educational Revitalization in the Americas (PREAL) states that over 50% of indigenous women are illiterate.
- 1.9 Table I-2 shows a breakdown of the adult population by level of schooling. The proportion of the indigenous population with no education is over 10 times that of nonindigenous persons; and only 12.5% of indigenous people have studied beyond basic education. The greatest disadvantages are seen among indigenous women and indigenous comarcas.

¹ Opinions differ on how many indigenous groups there are in Panama (some sources refer to seven, while others claim eight), because the Ngöbe, Buglé, Emberá and Wounaan peoples are often grouped together (Ngöbe-Buglé, and Emberá-Wounaan) since they belong to the same territorial units and are ultimately tending to merge ethnically.

² Comarcas are territorial units in which the indigenous peoples of Panama live. They have been created by law and have a specific political-administrative organizational structure. The comarcas are governed by their own special institutions, and any government intervention in them requires the consent of the indigenous people living there. These territorial units are characterized by low population density, high geographic dispersion, and difficulties of access and internal mobility.

Table I-2 Adult Indigenous Population and Level of Schooling, 2008

	Nonindigenous	All indigenous persons	Indigenous women	Indigenous comarcas
None	3.5%	37.6%	47.3%	47.7%
Basic	44.2%	49.9%	45.0%	45.4%
Secondary	28.8%	10.1%	5.9%	5.9%
Higher education	23.5%	2.4%	1.8%	1.0%

Source: Indicators of education and indigenous peoples in Panama, IDB.

- 1.10 Problems of quality in the education system are particularly severe in the comarcas. The SINECA 2008 national test results show that a small proportion of students achieve satisfactory levels in basic learning (12% in Spanish and 20% in mathematics). Quality issues in education are aggravated by problems of access to schools, the geographic and professional isolation of teachers, programs of study that are not culturally relevant, and the high levels of poverty prevailing among these population groups, among other factors.
- 1.11 The factors associated with the results of tests to measure learning outcomes (SINECA 2008) show that teacher training and the availability of educational materials in schools and classrooms can help improve students' learning. In indigenous comarcas, pedagogic classroom practices tend to be applied mechanically, classrooms are poorly equipped, and teachers do not effectively use the few resources they have available to them.
- 1.12 As shown in Table I-3, quality issues lead to high repetition rates and low rates of student retention, with the result that barely half succeed in completing primary school, and only one in four completes the nine grades of compulsory basic education. This, in turn, reduces the possibilities for young people from the comarcas to continue studying in secondary school. Compared to the national level, retention rates in the comarcas are more than 50% lower at each level of education, which shows that school progress among Panamanian students is highly unequal.

Table I-3: Education Indicators - National Average vs. Indigenous Comarcas

Level (grade)	National total		Indigenous comarcas	
	Coverage	Retention	Coverage	Retention
Primary 6th grade	100	88	100	48
Middle school 9th grade	67	56	33	22
Secondary school 12th grade	24	34	10	4

Source: MEDUCA, Education Statistics Department (Net coverage and retention, 2009) and Education Evaluation Department (Learning outcomes, SINECA 2005).

- 1.13 In addition to the poor quality and low levels of internal efficiency (low retention rates) that limit the number of students who are in a position to continue their studies and complete secondary education, there are serious barriers to accessing secondary schooling in the comarcas. These result from the highly dispersed enrollment, very precarious access conditions, and virtual nonexistence of secondary schools in the comarcas. According to data from the MEDUCA Statistics Department, the vast majority of middle and secondary schools are located in urban areas, which forces potential students either to abandon their studies or else migrate to the cities.
- 1.14 In the comarcas with the highest concentration of indigenous populations (Kuna Yala and Emberá) school infrastructure is precarious: many schools do not have drinking water or electricity; equipment is scarce and deficient; and very few schools have libraries, laboratories, Internet access, sports facilities, or an infirmary. According to a study by the Ministry of Economy and Finance (MEF)³ based on household surveys in indigenous comarcas, about 15% of these communities had primary schools that were unfinished, only 13% had adequate infrastructure, and 30% were in precarious physical condition.
- 1.15 Administratively, schools in the comarcas are under education regions located outside the comarca territory. Regional supervisors do not have the resources or transportation to visit them on a routine basis, and communication between the schools and their regional supervisor is sporadic and difficult. In the past, in the comarcas, as in the rest of the countryside, there was an education network encompassing a group of schools serving a homogeneous territory. These networks have since disappeared, and each school principal works in isolation, without pedagogic support from supervisors, and relies on the school's own resources to maintain education service.
- 1.16 Improving quality and access for indigenous schools thus needs to be approached holistically in the area of intervention, rebuilding and strengthening educational networks encompassing several schools that support each other and work in coordination—not only to ensure the necessary investment in infrastructure and pedagogic resources to improve education quality, but also to obtain pedagogic and

³ MEF. Caracterización Socioeconómica de la Pobreza [Socioeconomic characterization of poverty] undated.

managerial support from school supervisors. These networks will be structured around center-schools that serve as education development hubs providing supporting offices for supervision and complementary facilities to facilitate the work and continuous training of principals and teaching staff, in addition to full, high-quality schooling up to the secondary level.

- 1.17 **The Bank's experience in the sector.** The Bank has been providing support to improve basic education in Panama through the Educational Development Project (PRODE) (loan 1013/OC-PN). This was approved in 1997 and reformulated in 2006, and should complete execution in 2011.
- 1.18 Loan 1013/OC-PN (PRODE) has been in its concluding phase since its reformulation in 2006 and has targeted preschool and basic education, with a view to improving conditions for learning among the most vulnerable and poor children, particularly in rural and indigenous areas. Its actions include expanding the supply of education at these levels, enhancing learning quality, improving school facilities through repairs and new infrastructure, and helping MEDUCA to reform secondary education. PRODE has helped increase the coverage of preschool education in the countryside, with the Community Early Childhood Education Center (CEIC) program, which is gradually being integrated into schools. Moreover, thanks to the multigrade pre-secondary program promoted by PRODE, rural areas, and particularly comarcas, now have better middle-school coverage. It is estimated that over 8,000 students from rural areas are pursuing middle school studies thanks to this program.
- 1.19 PRODE's performance has been continuously hampered by the complexity of its design, the low level of installed technical capacity, and frequent changes in staff in the executing unit, which frustrated many of the efforts made and the expected results. The present program has well-defined spatial limits, focuses on actions that are expected to have the greatest impact on the problems identified, and continues to tap into the sound institutional capacity built over the last year with staff currently executing PRODE, who will be retained in the new operation.
- 1.20 This operation is clearly aligned with the Bank's new country strategy with Panama 2010-2014, which is currently in preparation. The strategy sets the education sector as a priority, with the objective of improving quality and retention, and expanding the coverage of education in indigenous comarcas. The activities included in this operation, and the achievement of its objectives (see Results Matrix) will contribute to the results specified in the Country Strategy matrix, in terms of: (i) better learning outcomes in mathematics and Spanish in the early grades of basic education; (ii) increased retention of students through 9th grade; and (iii) increased coverage of middle school and secondary education.

B. Program strategy

- 1.21 As noted above, education indicators reveal a situation that is very unfavorable to indigenous groups, particularly those living in comarcas. Poor learning outcomes, particularly in early-grade Spanish and mathematics; low rates of school retention,

particularly at the end of primary school; and scant supply of middle school and secondary education are the main problems to be addressed in this operation.

- 1.22 The program will target three territories selected through a planning process that included geographic macroplanning analysis, to prioritize regions within the comarcas that have the highest population concentrations, the highest enrollments in basic education, and are the most accessible. A microplanning and dimensioning analysis was undertaken for the investments within those zones, based on the enrollment flows in each network of schools that feed the hub school, in which the new supply of full basic and secondary education services will be developed. The selected comarcas were Ngöbe-Buglé (in the Ñurum region), along with Kuna Yala and Emberá-Wounaan. These three areas of intervention encompass three school networks, consisting of 55 schools with a total enrollment of 8,112, which means the operation will benefit over 24,000 students during its useful life. The process of identifying, prioritizing, and dimensioning the investments is described in the [Economic Analysis](#).
- 1.23 The program proposes three specific objectives in these three school networks: (i) improve learning outcomes in language and mathematics in the early grades; (ii) help improve the retention and flow of students through the end of compulsory basic education; and (iii) expand access opportunities to secondary education for students who complete basic education.
- 1.24 Experience shows that programs that seek to improve learning outcomes have a greater impact when they act on fundamental learning at an early stage, starting at preschool and in the first few years of primary school. In this way, they help to reduce school failure and improve school retention throughout the student's school career. The program will act specifically to improve basic learning outcomes in language⁴ and mathematics, using active methodologies and educational materials (teacher manuals and structured workbooks for students), which will be adapted to the sociolinguistic and cultural situation in each comarca.⁵ The strategy includes participation by technical experts with experience in local cultures and, where necessary, in the local language, and by experts in preparing culturally appropriate

⁴ For several years, Panama has attempted to provide bilingual education in Spanish and an indigenous language, but this has failed to become institutionalized owing to a lack of teachers with knowledge and mastery of the respective indigenous languages. In this operation, in Ñurúm (El Peñón) and Emberá-Wounaan (Lajas Blancas), basic literacy skills will be taught in Spanish, because the children there come to school with a mastery of that language. In Kuna Yala basic literacy will be taught in the Kuna language, provided suitable teachers can be found. Accordingly, this document uses the term "language" to refer to the linguistic domain it aims to develop, and "Spanish" to refer to the corresponding academic curriculum.

⁵ The program starts from the assumption that membership of a linguistic community is the result of cultural belonging and respect for indigenous cultures. The cultural and linguistic characteristics of the materials produced will be decided on by experts in the subject and by the inhabitants themselves who are the users of the education services being provided, in an interactive process that has unfolded in the region over the years, after ideological paradigms that simplified intercultural problems had been set aside. See López Luis Enrique and Inge Sichra, *Intercultural Bilingual Education among Indigenous Peoples in Latin America*, PROEIB Andes.

educational materials. It also envisages support from MEDUCA technical staff for each of the schools to support and systematically measure progress in applying these methodologies and materials.⁶ Better learning outcomes are expected to result in higher rates of student retention until the end of basic compulsory education (9th grade) and enable them to enter secondary education.

- 1.25 The program aims to expand the supply of education in the comarca territories by building three schools that will serve as educational network hubs, providing full education services up to secondary school, and benefiting all students from the network of schools in the area. These center schools will serve schools in their network and thus become a hub of educational development in their territory. Facilities will be built in the same premises for supervision departments to provide pedagogic and administrative support to the schools in the network, thus helping to strengthen professional development among teachers and school principals.
- 1.26 On a complementary basis, from 2010 onwards, the program strategy will be complemented by a Panamanian government initiative to pay families up to US\$200 per year for each student remaining in school until the secondary level (universal scholarship). This additional income represents a significant economic stimulus for poor families, and is expected to have an impact on the demand for education, particularly at the middle and secondary school levels.

C. Objectives, components, and cost

- 1.27 The objective of this operation is to help improve access to and the quality of education in indigenous comarcas. Its specific objectives are to: (i) improve learning outcomes in language and mathematics in the early grades; (ii) help improve the retention and flow of students to complete their compulsory basic education; and (iii) expand access opportunities to secondary education for students who complete basic education. To that end, the operation has been structured in two components:

1. Component 1. Educational and management networks (US\$27.9 million)

- 1.28 This component has two specific objectives: (i) guarantee the supply of quality preschool, full basic, and secondary education in the comarcas; and (ii) encourage students to stay in school.
- 1.29 To achieve these objectives, infrastructure investments will be made to improve service conditions and expand access. Based on those investments, three school networks will be organized to expand access and promote the retention of the largest possible number of students in the Ngöbe-Buglé, Emberá-Wounaan, and Kuna Yala comarcas. The networks thus formed will strengthen school

⁶ This action is based on a similar strategy to that used by the new school program in Colombia, which systematically includes curricula, community, training, monitoring, and management strategies. It is based on the use of student and teacher manuals, and its effectiveness has been systematically evaluated (see McEwan, P. Evaluating Rural Education Reform: The Case of Colombia's Escuela Nueva Program. IDB, 1996).

management by funding actions to improve their school administration practices and organization, and make better use of resources for materials and maintenance of the infrastructure that is built. At the same time, funding will be provided to create school networks with a single principal for a group of neighboring multigrade schools, with the aim of providing a full supply of education services at the general basic education level throughout the territory.

- 1.30 The following specific activities will be financed: (i) expansion, refurbishment, replacement, and maintenance of an estimated 50 schools providing basic education (108 early, primary, and middle school classrooms); (ii) construction of three new secondary schools (30 classrooms) in the comarcas; (iii) construction of three regional management and supervision facilities in the comarcas; (iv) construction of three dormitories for students, and three for teachers; and (v) periodic coordination meetings (workshops) among the principals of the program's beneficiary schools.

2. Component 2. Improvement of language and mathematics in preschool and in 1st, 2nd, and 3rd grades of basic education (US\$2.4 million)

- 1.31 The specific objective of this component is to improve learning outcomes in language and mathematics in preschool, and in the 1st, 2nd, and 3rd grades of basic education in the comarcas. In view of students' poor performance in the SINECA (2008) and SERCE (2008) tests in both subjects, teachers' skills and abilities in methodologies for teaching reading, writing and mathematics need to be improved, since these subjects are the building blocks for learning in all other areas of knowledge. This operation will finance the development of a strategy to improve learning outcomes in these two subjects, starting at the preschool level, and continuing up to 3rd grade of basic education.
- 1.32 This component will finance the following specific actions in an estimated 55 schools in the three comarca networks: (i) the training of a team of facilitators, in methodologies and content for teaching mathematics and language at the preschool level and in the first three years of basic education. This technical team will consist of national supervisors and technical staff from the indigenous comarcas, who will receive intensive training from specialists in these subjects to use the methodologies appropriately in the sociocultural context of the comarcas; (ii) the training of a team of facilitators from the comarcas, to work with some 500 teachers in early childhood education and in the 1st, 2nd and 3rd grades of basic education, as well as 20 technical supervisors and 50 school principals. The training will focus on content and didactic methods in mathematics and Spanish, multigrade methodology, formative evaluation and monitoring to support teachers in the classroom; (iii) resources associated with supervision visits and monitoring by supervising technical staff for 500 teachers in their classrooms, to strengthen and consolidate the training content; (iv) implementation of a strategy for formative evaluation of students' learning; and (v) the production of workbooks for students, methodology manuals for teachers, and the purchase of classroom libraries with at least 80 titles each for 500 sections. Additional financing will be provided to swiftly

test the validity and reliability of the materials designed under the program in approximately 10 schools that are most accessible from Panama City.

- 1.33 The cost of the operation is US\$32,402,820, of which US\$30 million will be financed by the Bank and US\$2,402,820 will be provided as local counterpart funding. Table I-4 summarizes the estimated costs.

Table I-4: Cost Table in US\$

Description	IDB	Local	Total	%
Component 1. Educational and management networks	27,546,240	438,000	27,984,240	86.36
School and management buildings	22,687,350	-	22,687,350	
Works supervision	1,512,490	-	1,512,490	
Educational furniture and equipment	3,346,400	378,000	3,724,400	
Coordination workshops with principals	-	60,000	60,000	
Component 2. Improvement of language and mathematics	1,383,760	1,054,820	2,438,580	7.53
Stock of educational materials	793,460	490,220	1,283,680	
Training for teachers and school principals	70,000	564,600	634,600	
Educational monitoring and evaluation	520,300	-	520,300	
Management	490,000	910,000	1,400,000	4.32
Audit	80,000	-	80,000	0.25
Contingencies	500,000	-	500,000	1.54
Total	30,000,000	2,402,820	32,402,820	100%

II. FINANCING STRUCTURE AND RISKS

A. Financing instruments

- 2.1 The estimated disbursement schedule is as follows:

Table II-1: Disbursement schedule (US\$ million)

Source	Year 1	Year 2	Year 3	Year 4	Total
IDB	10.00	10.00	9.00	1.00	30.00
Local	0.70	0.70	0.70	0.30	20.40
Total	10.70	10.70	90.70	1.30	320.40

B. Environmental risks and social safeguards

- 2.2 This has been classified as a category “B” operation, since it involves civil works. Pursuant to the Bank’s Environment and Safeguards Compliance Policy (OP-703), consulting services have been contracted to identify ways to mitigate any negative effects. The results of the consulting services are contained in the [Environmental and Social Management Report](#) (EMSR). As this is a preschool, basic, and secondary school operation, it is not expected to have any adverse social effects on the population.

C. Fiduciary risks

- 2.3 The institutional capacity assessment shows that the MEDUCA line areas involved in the program lack staff with the necessary experience in executing Bank-financed projects. Accordingly, the implementation arrangements envisaged seek to fill that need, drawing on experience gained in the last year of execution of loan 1013/OC-PN. Management and technical staff from the existing coordination unit are participating actively in the design of the new program, and will subsequently be responsible for executing it. Implementation of a new financial application to complement the Panamanian Integrated Financial Management System (SIAFPA), which has not yet begun operating, is a source of uncertainty about how it will operate, so the aim will be to incorporate the program into the SIAFPA projects module which is being developed by the MEF. The elimination of prior control by the Comptroller General of the Republic raises the need to strengthen internal controls in the executing agency, for which the auditors hired to review the program's financial statements should also issue a semiannual professional opinion on the effectiveness of the internal controls adopted for the program's payments.

D. Other risks

- 2.4 **Strengthening technical teams.** The program requires major technical and institutional capacity to enable the strategy for improving Spanish and mathematics in the early grades to achieve the expected results in indigenous comarcas. For that reason, the program will fund intensive training over a 24-month period for technical teams of national and regional supervisors in both subjects; and it will also implement a system to monitor and track implementation of the strategy in each beneficiary school, to ensure that activities are being implemented on time and with expected quality.
- 2.5 **Dimensioning the infrastructure.** In addition, the economic analysis and the methodology for microplanning and dimensioning the infrastructure have highlighted the need for investment planning linked to the analysis of enrollment flows in the school network of the area of influence, and to targets to increase retention at the middle school level, which form part of the operation's Results Framework. The economic analysis of the infrastructure proposal for Ustupu in the Kuna Yala comarca shows that the Ustupu area needs to be revisited before accepting the bidding documents, so that alternative solutions can be proposed to ensure that the selected infrastructure alternative is cost-efficient.
- 2.6 As most of the program beneficiaries will be indigenous children and young people, it is important to make sure the educational services provided are relevant. For that purpose, both the methodologies and the content of instruction in language and mathematics will be tailored to the sociocultural contexts in which the program is operating, to assure the interest and motivation of students and their families.

III. IMPLEMENTATION AND PLAN OF ACTION

A. Summary of implementation arrangements

- 3.1 The borrower is the Republic of Panama, with the Ministry of Education (MEDUCA) serving as executing agency. For program execution, a Project Office will be created under MEDUCA's cabinet, and it will benefit from experience gained from implementing previous projects in the education sector. This office will be linked to the MEDUCA technical units involved in program execution. To help foster ownership of actions and institutionalize program execution processes, a Strategic Steering Committee will be set up, chaired by the Minister and consisting of the MEDUCA directors involved in project execution and the Project Coordinator. The committee will approve annual work plans (AWPs) and semiannual reports prepared by the Project Office. Operationally, the staff assigned to this office will work with the line units through coordination in the following areas: (i) technical; (ii) infrastructure; (iii) procurements; (iv) programming and monitoring; and (v) finance and budget.
- 3.2 The MEDUCA Finance and Institutional Development Department will manage the loan resources and counterpart funding. The National General Basic Education Department, supported by the Engineering and Architecture and Early, Secondary Professional and Vocational, and Secondary Academic Departments, will be responsible for the program's programming and technical execution. It will also prepare terms of reference and specifications for the program's goods and consulting services, in coordination with the aforementioned departments. Project monitoring and evaluation will be the responsibility of the National Education Evaluation Department and the National Education Planning Department, respectively.
- 3.3 The Project Office will coordinate periodic meetings of the Strategic Steering Committee; maintain communication with the Bank for all program implementation activities; be responsible for conducting all of the program's procurement and contracting processes; and prepare program execution documents and reports, as well as disbursement requests to be sent to the Bank. The Operating Manual will outline the implementation processes and responsibilities of all participants.
- 3.4 Disbursements will be released in the form of advance payments to meet the program's needs as indicated in the financial plan.
- 3.5 Documentation supporting the disbursements will be reviewed ex post. Goods and works procurements using price comparison methods will also be reviewed ex post. The first national competitive bidding (NCB) process and the first process to contract consulting firms for amounts less than US\$200,000 will be reviewed ex ante.
- 3.6 **Procurement.** Procurements of goods and services, contracting for works and the selection and contracting of consulting services will be undertaken pursuant to the Bank's policies (documents GN-2349-7 and GN-2350-7), details of which are set

out in the [procurement plan](#). In procurements involving NCB, the document for works contracting will be used, or else a separate document for goods will be agreed upon that is consistent with the Bank's procurement policies.

- 3.7 **Retroactive financing.** The Bank may accept program-eligible expenses of up to US\$2 million incurred by MEDUCA since 1 September 2010 (the operation profile approval date) for recognition and reimbursement, once the loan proceeds become available. These procedures are consistent with the provisions of the Bank's policy on retroactive expenses (OP-504). MEDUCA wishes to start the civil works as soon as possible, and hopes that contract advance payments will have been released before the loan contract is approved.
- 3.8 **Audit.** The external audit will be performed by independent auditors acceptable to the Bank, pursuant to the Policy in document OP-273-1 and the "Guidelines for Financial Reports and External Audit of Operations Financed by the Inter-American Development Bank." The program's annual audited financial statements will be filed within 120 days of the end of the fiscal year, and the final statements within 120 days following the last disbursement. The audit forms part of the program's cost and will be financed from the loan proceeds.
- 3.9 **Special contractual clauses. The following are special conditions precedent to the first disbursement: (i) creation of the Project Office with the necessary staffing and suitable capacities for executing the project; (ii) entry into force of the program's Operating Manual; and (iii) formation of the program's Strategic Steering Committee.**

B. Monitoring and evaluation

- 3.10 **Economic evaluation.** The economic evaluation of the project focused on the infrastructure component, which represents 86% of the proposed investment. For this purpose, a macroplanning analysis was undertaken to identify the most suitable localities for the educational development hub in each comarca. Following this, an exercise of microplanning and dimensioning the investments to be made in each zone was undertaken, to determine the size of the educational hub based on the enrollment flows of the schools in its area of influence, and to cost the proposed investments.
- 3.11 Lastly, a [cost-effectiveness analysis](#) was performed of the recommended investments, which made it possible to compare the educational impact (students per year benefited) for every dollar invested in the proposed alternative, compared to the option of only building an educational hub for secondary education. The analysis showed that comprehensive investment to improve the entire feeder network for each hub school is crucial for improving the retention of students through the end of compulsory basic education, and thus guarantee sustainable demand for secondary education. It also showed that the higher cost of the investments proposed (throughout the network) compared to the original alternative of only building a secondary school in the zone, is more than offset by a much

- larger increase in the number of students benefited, which will result in a lower cost per beneficiary, or higher impact per dollar invested.
- 3.12 To evaluate the effectiveness of actions to improve learning outcomes in language and mathematics in the first, second, and third grade (Component 2), early reading and math assessments will be used to monitor and continuously evaluate student learning and the effectiveness of the actions taken, and to assess their impact and results at the end of the program.
- 3.13 **Impact assessment.** As the actions to be undertaken will organize pedagogic work so that the same teacher accompanies students from 1st grade through 3rd grade, conditions will exist to monitor student learning outcomes throughout two or three years of program actions. Moreover, the actions will initially be piloted in a small group of schools, to evaluate their effectiveness and impact before extending them to the other schools in the comarcas and eventually nationwide. Taking advantage of this, an impact evaluation will be performed of this pilot intervention.
- 3.14 A quasi-experimental design is proposed consisting of beneficiary schools and the control group, together with a random sample of students to whom the evaluation instruments will be applied (duly adapted to the design of the program's actions and the local context), at the start and end of 1st grade, and at the end of 3rd grade. This will make it possible to monitor longitudinally the students in the sample and measure the impact of the program's actions through an indicator of differences in learning levels achieved. The cost of the evaluation, for which a specialized firm will be contracted, is estimated at roughly US\$100,000 chargeable against program funds. The timetable and plan of action for the impact evaluation will be agreed upon with MEDUCA, to be consistent with the schedule for the design and implementation of the planned pedagogic actions.

**Development Effectiveness Matrix
Summary**

Indicator	Score	Maximum Score
I. Strategic Relevance	High	
1. IDB Strategic Development Objectives	6.5	10
Country Diversification	2.0	2
Corporate Initiatives	2.5	2.5
Harmonization and Alignment	0.0	3.5
Beneficiary Target Population	2.0	2
2. Country Strategy Development Objectives	9.6	10
Country Strategy Sector Diagnosis	6.0	6
Country Strategy sector objective & indicator	3.6	4
II. Development Outcomes - Evaluability	Highly Satisfactory	
3. Evidence-based Assessment & Solution	7.6	10
4. Evaluation & Monitoring Plan	8.2	10
5. Cost-Benefit or Cost-Effectiveness	7.0	10
6. Risks & Mitigation Monitoring Matrix	7.5	10
III. IDB's Role - Additionality		
7. Additionality	3.0	10
Technical Assistance provided prior the project	3.0	3
Improvements in management of financial, procurement, monitoring or statistics internal controls	0.0	4
Improvements in environmental, health and labor performance	0.0	3

I. Strategic Relevance: This is an investment Project in Panama, a C/D country group, Sub-Region of Central America. The objectives are focused on the improvement of the quality and access of elementary education in indigenous towns, gauged by the enrollment rate and the results of academic test on math and language. The project is aligned with the Strategy of the Bank in the Country, especially in supporting the National Indigenous Policy. It is targetted towards the poor and is aligned to the Education corporate initiative.

II. Evaluability: The project overall has high evaluability, including a strong diagnosis and well thought solution, SMART indicators to track its performance, and adequate risk assessment (although indicators for mitigation measures are missing). The quasi-experimental impact evaluation will allow to measure improvement in core educational outcomes, reading and math fundamentals, attributable to the intervention. It also has an economic analysis for the infrastructure component.

III. Additionality: . It highlights a technical cooperation to analyze the institutional capability of Panama's Ministry of Education. Moreover, the proposed customization of academic tests in indigenous communities in the evaluation plan will set a precedent of evaluation with international standards.

RESULTS MATRIX

Project Objective:	The objective of this operation is to help improve access to and the quality of education in indigenous comarcas. Its specific objectives are to: (i) improve learning outcomes in language and mathematics in the early grades; (ii) help improve the retention and flow of students to complete their compulsory basic education; and (iii) expand access opportunities to secondary education for students who complete basic education.
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Purposes	Baseline	Final target	Comments
Increase the proportion of students who complete compulsory basic education (9th grade) and enter secondary school in the project's areas of intervention.	Retention rate through to 9th grade: (22% average for the comarcas in 2009) Net secondary school enrollment rate: (9.6% average for the comarcas in 2009)	Retention rate through to 9th grade: 33% Target for net secondary education coverage for the comarcas: 15%	Baseline and targets will be adjusted in the first quarter of 2011, before the project has had any impact. Comarca data will be obtained, including specific data on the educational circuits subject to intervention.
Increase in the improvement of learning outcomes in Spanish and mathematics at the end of 3rd grade in the program's schools. (Indicator: Percentage of students with intermediate or better results in SINECA tests).	(Results 3rd grade, official indigenous schools, SINECA 2008) Spanish: 12% Mathematics: 20%	Spanish: 14.5% Mathematics: 22.5%	The baseline will be adjusted in the first four months of the 2011 school year, for which purpose a language and mathematics test will be applied in 3rd grade, using the 2008 SINECA tests. The target for 2014 will be adjusted in the first four months of 2011. It is assumed that the 3rd grade tests will be administered in September 2014.

	Base	Year 1	Year 2	Year 3	Year 4	Final target	Comments
Component 1. Educational and management networks							
Outputs							
Secondary school classrooms built and equipped.	0	0	30	0	0	30	The output indicators will be adjusted during contract negotiations in light of the final scale of the project's infrastructure investments.
Schools receiving maintenance (minor repairs) (83 classrooms).		15 (33 classrooms)	15 (33 classrooms)	7 (17 classrooms)		37 (83 classrooms)	
Schools refurbished and equipped (25 classrooms).	0	2 (5 classrooms)	4 (10 classrooms)	4 (10 classrooms)	0	10 (25 classrooms)	
Regional offices built and operating.	0	0	3	0	0	3	
Meetings of principals held, on working in a network.	0	1	1	1	0	3	
Outcomes							
Net coverage rate by level (in the program's areas of intervention): <ul style="list-style-type: none"> Primary Middle Secondary 	MEDUCA Data, 2009 (%) (average comarcas) Primary: 97% Middle: 33.8% Secondary: 9.6%	Percentage:	Percentage:	Percentage:	Percentage:	Percentage: (preliminary estimate) Primary: 99% Middle: 50% (P) Secondary: 15% (P)	The targets for net coverage rates will be adjusted during contract negotiations, based on the final dimensioning the infrastructure investments and taking account of the retention parameters agreed upon as program targets.
Cumulative retention rate: (Percentage of students entering 1st grade who complete the indicated grade). <ul style="list-style-type: none"> Primary (6th grade) Middle (9th grade) 	MEDUCA (2009) data. 48% 22%					Targets (2014) 75% 45%	

	Base	Year 1	Year 2	Year 3	Year 4	Final target	Comments
Component 2. Improvement of language and mathematics in preschool and in 1st, 2nd, and 3rd grade of basic education							
Outputs							
Documents prepared containing the conceptual and operational framework of the strategy to improve Spanish and mathematics learning, from early childhood education through to 3rd grade.	0	1				1	
Teacher manuals and student workbooks prepared and distributed.	0	Early childhood education: Teacher manuals Spanish: 3 Mathematics: 3 Student Integrated workbook: 1 1st grade teacher manuals Spanish: 3 Mathematics: 3 Student workbooks Spanish: 3 Mathematics: 3	2nd grade: Teacher manuals Spanish: 3 Mathematics: 3 Student workbooks Spanish: 3 Mathematics: 3	3rd grade: Teacher manuals Spanish: 3 Mathematics: 3 Student workbooks Spanish: 3 Mathematics: 3		Teacher manuals for early childhood education to 3rd grade 12 language 12 mathematics Student workbooks Spanish: 9 Mathematics: 9 Integrated with early childhood education: 1	

	Base	Year 1	Year 2	Year 3	Year 4	Final target	Comments
Classroom libraries purchased and distributed.	0	528 libraries with 80 titles each	0	Restocking of 100 libraries with 80 titles each	0	628 libraries	
Boxes containing nonexpendable didactic materials, procured and distributed.	0	Early childhood education and first grade 264	2nd grade 132	3rd grade 132	0	528 boxes	
Packets of expendable materials procured and distributed.	0	528 packets from early childhood education to 3rd grade	528 packets from early childhood education to 3rd grade	528 packets from early childhood education to 3rd grade		2,112 packets	
Teachers, principals, and supervisors trained in three modules (mathematics and language).	0	528 teachers from early childhood education to 3rd grade 55 principals, 16 supervisors	528 teachers from early childhood education to 3rd grade 55 principals 16 supervisors	528 teachers from early childhood education to 3rd grade 55 principals 16 supervisors	528 teachers from early childhood education to 3rd grade 55 principals 16 supervisors	528 teachers from early childhood education to 3rd grade 55 principals 16 supervisors	
Teachers and supervisors trained in pedagogic leadership, communication, and school management to strengthen learning outcomes in Spanish and mathematics.	0	2,750	2,750	2,750		2,600 teachers in early childhood education and 1st, 2nd, and 3rd grades trained.	
School principals trained in pedagogic leadership, communication, and school management, to strengthen learning	0	550	550	550		550 principals trained.	

	Base	Year 1	Year 2	Year 3	Year 4	Final target	Comments
outcomes in Spanish and mathematics.							
Teachers receiving three support actions per year, for three years, from supervisors.	0	0	1,650	1,650	1,650	2,600 teachers receive three support visits from district technical staff for two years.	The remainder of the teachers (3,985) received one year of support by the end of the program.
Teachers receiving didactic packets and methodological guides	0	2,600				2,600 teachers receive didactic packets	
Teachers receiving packets of expendable material.	0	2,600	2,600	2,600		2,600 teachers received packets of expendable material	
Students receiving workbooks in Spanish and mathematics.	0	60,000				60,000 children receive workbooks	
Supervisors applying the supervision system.	0		125	125	125	126 supervisors applying the supervision system.	
Outcomes							
Repetition rates in 1st, 2nd, and 3rd grades in the participating schools have fallen.	1st grade: 9% 2nd grade: 8.4% 3rd grade: 6.2%	1st grade: 8% 2nd grade: 6% 3rd grade: 4%	1st grade: 6% 2nd grade: 4% 3rd grade: 4%	1st grade: 4% 2nd grade: 4% 3rd grade: 3%	1st grade: 3% 2nd grade: 2% 3rd grade: 2%	1st grade: 2% 2nd grade: 2% 3rd grade: 2%	The baseline is calculated using 2008 data from the MEDUCA Statistics Department. It will be adjusted in the first four months of the 2011 school year, along with the annual targets.
Language and mathematics skills have improved in the first three grades in the program	1st grade	1st grade	2nd grade	3rd grade			The early grade math and reading assessment tests will be applied to 1st grade students who are beginning the experience. In the

	Base	Year 1	Year 2	Year 3	Year 4	Final target	Comments
beneficiary school.							first year, these tests will be applied to a sample of 1st grade students at the start of the school year (March) and at the end of it (December). Subsequently, the trend will be measured in the two other grades (2nd and 3rd).

SUMMARY PROCUREMENT PLAN

PERIOD COVERED BY THIS PROCUREMENT PLAN: SEPTEMBER 2010 TO MARCH 2012

Ref. No.	Description and type of the procurement contract	Estimated procurement cost (US\$ thousand)	Procurement method ¹	Review (ex ante or ex post)	Source of financing and percentage		Prequalification (Yes/No)	Estimated dates		Status (pending, in process, awarded, canceled)	Comments
					IDB %	Local/ Other %		Publication of Specific Procurement Notice	Contract completion		
1	GOODS	3,411,347				-					
	A packet of expendable material for early childhood education teachers.	75,240	NCB	ex post	100	-	No	10/1/10	2/2/11	Pending	
	A packet of nonexpendable material for early childhood education teachers.	31,680	PC	ex post	100	-	No	10/1/10	2/2/11	Pending	
	A packet of nonexpendable materials for 1st, 2nd, and 3rd grade (language).	31,680	PC	ex post	100	-	No	10/1/10	2/2/11	Pending	
	A packet of expendable material for 1st, 2nd, and 3rd grade (mathematics).	95,040	NCB	ex post	100	-	No	10/1/10	2/2/11	Pending	
	A set of language materials (early childhood education).	18,810	PC	ex post	100	-	No	10/1/10	2/3/11	Pending	
	A set of materials for 1st, 2nd, and 3rd grade (language).	95,040	NCB	ex post	100	-	No	10/3/10	4/1/11	Pending	
	Procurement and distribution of classroom libraries.	314,000	ICB	ex ante	100	-	No	2/3/11	8/2/11	Pending	

¹ **Goods and works:** **ICB:** International competitive bidding; **LIB:** Limited international bidding; **NCB:** National competitive bidding; **PC:** Shopping; **DC:** Direct contracting; **FA:** Force account; **PSA:** Procurement through specialized agencies; **PA:** Procurement agents; **IA:** Inspection agents; **PLFI:** Procurement in loans to financial intermediaries; **BOO/BOT/BOOT:** Build, own, operate/build, operate, transfer/build, own, operate, transfer; **PBP:** Performance-based procurement; **PLGB:** Procurement with loans guaranteed by the Bank; **CPP:** Community participation in procurement.

Consulting firms: **QCBS:** Quality- and cost-based selection; **QBS:** Quality-based selection; **FBS:** Selection under a fixed budget; **LCS:** Least-cost selection; **CQS:** Selection based on the consultants' qualifications; **SSS:** Single-source selection;

Individual consultants: **NICQ:** National Individual Consultant selection based on qualifications; **IICQ:** International Individual Consultant selection based on qualifications.

Ref. No.	Description and type of the procurement contract	Estimated procurement cost (US\$ thousand)	Procurement method ¹	Review (ex ante or ex post)	Source of financing and percentage		Prequalification (Yes/No)	Estimated dates		Status (pending, in process, awarded, canceled)	Comments
					IDB %	Local/ Other %		Publication of Specific Procurement Notice	Contract completion		
	School and administrative furniture.	1,946,877	ICB	ex ante	100	-	No	6/15/11	1/30/12	Pending	
	Biology, chemistry, and physics laboratories.	283,500	ICB	ex ante	100	-	No	6/15/11	1/30/12	Pending	
	Medical equipment (three infirmaries).	360,000	ICB	ex ante	100	-	No	6/15/11	1/30/12	Pending	
	Design, preparation, and printing of language workbooks for early childhood education, 1st, 2nd, and 3rd grades.	35,000	PC	ex post	100	-	No	2/3/12	8/21/12	Pending	
	Design, preparation, and printing of mathematics workbooks for early childhood education, 1st, 2nd, and 3rd grades.	35,000	PC	ex post	100	-	No	2/3/12	8/21/12	Pending	
	Packet of material by section for the training of teachers, principals, and supervisors.	50,000	PC	ex post	100	-	No	2/3/12	8/21/12	Pending	
	Manuals for teachers (2 per grade).	9,480	PC	ex post	100	-	No	2/27/12	9/13/12	Pending	
	Didactic packet for facilitators.	30,000	PC	ex post	100	-	No	3/9/12	9/25/12	Pending	
2	WORKS	20,442,205									
	School construction, repair, remodeling, and maintenance.	20,442,205	ICB	ex ante	97.7	2.3	No	9/15/10	9/17/12	Pending	Three processes for awarding packets for each comarca: one for Ñurum, another for Emberá and another for Kuna Yala for US\$6.70 each

Ref. No.	Description and type of the procurement contract	Estimated procurement cost (US\$ thousand)	Procurement method ¹	Review (ex ante or ex post)	Source of financing and percentage		Prequalification (Yes/No)	Estimated dates		Status (pending, in process, awarded, canceled)	Comments
					IDB %	Local/ Other %		Publication of Specific Procurement Notice	Contract completion		
3	CONSULTING SERVICES	4,818,441			-	-					
	Technical assistance to develop the pedagogic strategy and support for the technical team.	260,000	IICQ	ex post			No	9/1/10	4/4/14	Pending	
	Design of the four-year teacher training plan.	50,000	IICQ	ex post			No	9/2/10	10/12/10	Pending	
	Preparation of teacher training modules.	20,000	QBS	ex post			No	10/12/10	11/22/10	Pending	
	Works supervision.	4,088,441	QCBS	ex post			No	10/12/10	9/15/12	Pending	Three consulting services; one for each works contract.
	Design and application of the tests.	200,000	QBS	ex ante			No	1/3/11	4/4/14	Pending	
	Final project evaluation.	200,000	QBS	ex ante			No	11/30/11	5/30/14	Pending	