

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PANAMA

INNOVATION IN SCHOOL INFRASTRUCTURE

(PN-L1072)

LOAN PROPOSAL

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ELECTRONIC LINKS	
REQUIRED	
1.	Development Effectiveness Matrix (DEM) Questionnaire http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36806746
2.	POA (Plan of activities for the first disbursement and the first 18 months of project implementation) http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36805281
3.	Monitoring and Evaluation Arrangements http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36804542
4.	Procurement Plan http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36805290
5.	Environmental and Social Management Report (ESMR) http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36808558
OPTIONAL	
1.	Economic Evaluation (Cost-Effectiveness) http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36806489
2.	Literature on Infrastructure and Achievement http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36804146
3.	Analysis of Institutional Capacity http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36804151
4.	Design of Curriculum Update and Validation and School Management Component http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36803340
5.	Institutional Capacity Survey http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36804143
6.	Draft Operations Manual http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36804285
7.	Do School Facilities Affect Academic Outcomes? http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36808967
8.	School Facility Conditions and Student Academic Achievement http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36808989
9.	School Infrastructure and Learning in Latin American Elementary Education: An Analysis based on the SERCE. http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36809072
10.	Infraestructura Innovadora y el Aprendizaje de los Alumnos: Literatura y Evidencias Internacionales [Innovative infrastructure and student achievement: international evidence and literature] http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36808498

ABBREVIATIONS

CGR	Contraloría General de la República [Comptroller General of the Republic]
DNP	Dirección Nacional de Proyectos [National Projects Department]
DNPE	Dirección Nacional de Planeamiento Educativo [National Education Planning Department]
EECA	Proyecto de Espacios Educativos y Calidad de los Aprendizajes [Educational Facilities and Learning Quality Project]
ICAS	Institutional Capacity Assessment System
MEDUCA	Ministry of Education
NPV	Net present value
PREAL	Programa de Promoción de la Reforma Educativa de América Latina y el Caribe [Latin America and Caribbean Education Reform Promotion Program]
PRODE	Proyecto de Desarrollo Educativo [Education Development Project]
SERCE	Second Regional Comparative and Explanatory Study
SIAFPA	Sistema Integrado de Administración Financiera de Panamá [Panama's Integrated Financial Administration System]

PROJECT SUMMARY

PANAMA INNOVATION IN SCHOOL INFRASTRUCTURE (PN-L1072)

Financial Terms and Conditions			
Borrower: Republic of Panama Executing agency: Ministry of Education (MEDUCA)		Flexible Financing Facility*	
		Amortization period:	25 years
		Original Weighted Average Life (WAL):	14.75 years
		Disbursement period:	4 years
		Grace period:	4 years
Source	Amount	Inspection and supervision fee:	**
IDB (Ordinary Capital)	US\$70 million	Interest rate:	LIBOR
Local	US\$10 million	Credit fee:	**
Total	US\$80 million	Currency of approval:	U.S. dollars from the Bank's Ordinary Capital
<p>Project objective/description: The objective of the operation is to help increase access to education through innovate school infrastructure and improvement in school and curriculum management. Specific objectives are to help facilitate student achievement through: (i) innovative infrastructure to improve and expand school facilities; and (ii) the creation of a school environment that fosters the use of student-centered teaching practices using innovative school facilities and school management that coordinates the areas of curriculum, pedagogy, and administration. This is expected to contribute to improving student achievement (paragraph 1.21).</p> <p>Special contractual clauses: Conditions precedent to the first disbursement: (i) Projects Office has been given the necessary personnel and capacities appropriate for project execution; and (ii) the project's Operations Manual has taken effect (paragraph 3.7).</p> <p>Exceptions to Bank policies: None</p> <p>Project qualifies as: SEQ [<input type="checkbox"/>] PTI [<input type="checkbox"/>] Sector [<input checked="" type="checkbox"/>] Geographic [<input checked="" type="checkbox"/>] Headcount [<input type="checkbox"/>]</p>			

* Under the terms of the Flexible Financing Facility (document FN-655-1) the borrower has the option of requesting changes to the amortization schedule as well as currency and interest rate conversions. In considering those requests, the Bank will take operational and risk management considerations into account.

** 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, problems, and rationale

- 1.1 **Low middle and high school coverage.** In recent years, Panama has made significant advances in school coverage, particularly at the preschool and primary levels, although problems of access persist at the middle school and high school levels.¹ While 36% of children between the ages of five and six attended preschool in 2000, today 65% do so. In primary school, access is considered universal, with 99% of children between the ages of 7 and 12 attending school at this level. Coverage remains low in middle school and high school (69%), however, and more than 30% of young people between the ages of 13 and 17 are not in school (see Table I-1).

Table I-1: Net Coverage Rates (%)

Year	Preschool	Primary	Middle and High School
2000	36	95	59
2010	65	99	69

Source: Ministry of Education (MEDUCA).

- 1.2 Moreover, there are significant regional inequalities in middle school coverage. Areas with a high dropout rate² also show the lowest rates of middle school coverage in the entire country. In the Ngäbe-Buglé and Guna Yala comarcas in particular, only 43% of young people attend middle and high school.
- 1.3 **Low internal efficiency.** Although progress is noted in terms of primary school completion and dropout rates, grade repetition problems persist at this level. In 2004, only 88% of students who entered the first grade completed primary school; today the completion rate is 94%. The dropout rate at that level fell from 2.7% in 2004 to 0.9% in 2010. In contrast, for every 100 students who enter the first grade of primary school, only 60 complete the cycle without repeating a grade. At the middle school level, the situation is even more problematic. Of the students who enter middle school, only 65% complete it, and there have not been any improvements in grade repetition (5%) and dropout (12%) rates in recent years. Dropout rates are particularly high in the comarca of Guna Yala (18%) and in Panama City (13.7%).³
- 1.4 **Low achievement levels.** In terms of achievement levels, national, regional, and international test results indicate high levels of deficiency. According to the national tests by SINECA,⁴ about 65% of students in third grade do not gain basic

¹ Basic education includes two years of preschool, six years of primary school, three years of middle school, and three years of high school. Primary school and middle school are compulsory (ages 4 to 14).

² The project will focus on these areas with high dropout rates.

³ Source: MEDUCA (2004 and 2010).

⁴ National Learning Quality Evaluation System (SINECA), 2008.

knowledge in Spanish and mathematics. In the Second Regional Comparative and Explanatory Study (SERCE), the results were similar: in reading, nearly 50% of third grade students and more than 30% of sixth grade students have not acquired the basic skills of reading and understanding a text.⁵ The results of this regional test show that Panama's achievements are consistently less than the average for the remaining Latin American countries.⁶ In addition, the level of inequality in learning achievement is high. The percentage of sixth grade students in rural schools who do not gain basic reading knowledge is twice the percentage of students in urban schools.⁷ At the middle and high school levels, the international PISA⁸ study shows that in reading and mathematics 65% and nearly 80% (respectively) of Panama's students did not achieve level 2, which is considered the minimum threshold of skills for a productive adult life.⁹

- 1.5 Other studies on educational quality indicate that students have not been able to develop the competencies needed for a productive adult life. These competencies include the areas of communication and language, logical thinking, problem-solving, projects development, information management using computer tools, and an entrepreneurial culture.¹⁰
- 1.6 The following factors contribute to coverage, internal efficiency, and achievement problems:
- 1.7 **Poorly trained teachers.** The Government of Panama has made a significant effort to raise the profile of the teachers. As a result, in 2010, 88% of primary and middle school teachers were qualified to teach their levels, compared with around 70% about five years earlier. Differences persist, however, both in terms of initial training and in-service training. The weaknesses inherent in initial teacher training involve teaching competencies, professional practices, the use of new teaching methods, and incorporation of technological tools. In addition, there are few opportunities for in-service training. As a result of these deficiencies, teachers do not have the competencies that would allow them to create environments suitable for learning.¹¹ In a SINECA study, 28% of students indicated that they did not

⁵ Echeverría, Herrera, E.I. (2010). *Estrategia para mejorar la calidad de la Educación Media* [Strategy for improving the quality of secondary education]. Panama: MEDUCA/IDB. Retrieved from <http://www.slideshare.net/milanyis/transformacion-curricular1>.

⁶ UNESCO. (2008). SERCE.

⁷ UNESCO. (2008). Second Regional Comparative and Explanatory Study (SERCE): Student Achievement in Latin America and the Caribbean. SERCE. Santiago: UNESCO.

⁸ PISA is the OECD Programme for International Student Assessment.

⁹ OECD. (2010). PISA 2009 Results: What Students Know and Can Do – Student Performance in Reading, Mathematics and Science (Volume I), <http://dx.doi.org/10.1787/9789264091450-en>.

¹⁰ Echeverría, H., E.I. (2010).

¹¹ MEDUCA, 2010 Educational Statistics; and PREAL, *Informe de Progreso Educativo Panamá* [Report on Education Progress Panama], 2007.

understand their teachers' explanations and 40% of students indicated that their teachers did not answer students' questions on the class.

- 1.8 **Insufficient and inefficient infrastructure.** In Panama, a significant percentage of students leave school because of a lack of secondary school supply where they live. Analyses of Panama's household survey indicate that 12% of youth aged 13 to 15 leave school due to problems relating to access.¹² In the areas the project will target, there are many schools that offer primary education but have no middle school. The infrastructure is not just insufficient; it is also in poor condition. School infrastructure conditions in Panama are poor compared to most Central American countries and the average in Latin America and the Caribbean. Only 62% of schools have water compared to 77% in the region; 50% have enough bathrooms, compared to 65% in the region; and 38% have a library compared to 52% in the region (see Table I-2).

Table I-2: Indicators of School Infrastructure Conditions¹³

	Regional average	Panama	El Salvador	Guatemala	Mexico	Nicaragua	Costa Rica
Schools with potable water	77	62	67	78	80	48	88
Enough bathrooms	65	50	67	52	65	28	62
Schools with school library	52	38	50	62	54	24	24

- 1.9 Deficient infrastructure conditions are a matter of concern. International literature on the relationship between school infrastructure, quality, and inclusion shows that the quality of school facilities has a direct effect both on teachers' motivation and behavior and on students' educational achievement, discipline, interest, and attention. School infrastructures can facilitate the teaching process when their design takes the following principles into account: (i) areas for movement, sports, recreation, and communication during break time; (ii) open spaces for individual and group educational activities; (iii) strategies for renewable use and conservation of natural resources; (iv) flexible multipurpose rooms; and (v) gender and diversity considerations. According to the SERCE study, school infrastructure is one of the principal factors influencing student achievement.¹⁴

¹² Analyses from Panama's household survey. (EH 2008).

¹³ SERCE (2008).

¹⁴ Schneider, M. (2002). *Do School facilities affect academic outcomes?* National Clearinghouse for Education Facilities, Washington D.C.; Earthman, G. (2002). *School Facility Conditions and Student Academic Achievement*, UCLA/IDEA, Los Angeles; Duarte, J., Gargiulo, C., and Moreno, M. (2011). *School Infrastructure and Learning in Latin American Elementary Education: An Analysis based on the SERCE*. Washington, D.C. IDB.

- 1.10 **Outdated curriculum.** In recent years, the Ministry of Education (MEDUCA) has conducted several studies pointing to various problems with the curriculum. Of the students who enter middle school, 40% believe that they are not developing the skills needed for a productive life. The curriculum does not reflect advances in the sciences, technology, or social and productive demands. Teaching style is characterized by mechanical repetition, practice, and memorization of concepts. Students are passive receivers of information. The international literature indicates that this teaching style is not the most effective for improving student achievement. Related studies analyzing ways to improve student achievement in basic general education in Panama primarily recommend: (i) updating curriculum content; (ii) strengthening the teacher training system for teachers on basic subjects and real monitoring so that the implementation of that training can be evaluated; and (iii) improving school supervision. They also recommend a curriculum that is student-centered and focused on competencies to achieve better learning outcomes.¹⁵
- 1.11 **Problems of education management.** School centers experience a disconnect between administrative management, curriculum management, and pedagogical management. There is often a lack of leadership within these three levels of management. Deficiencies in school management produce a series of problems within the schools, ranging from slow decision-making processes and lack of opportunities for discussions among teachers to deteriorated interpersonal relationships and learning environments. In addressing these kinds of problems, the international literature highlights the importance of developing educational projects in school centers to establish objectives and guide and direct the administrative, curricular, and pedagogical work of school staff.¹⁶ In addition, the literature indicates that school management can contribute to improvements in learning when there is close collaboration between the administration, teachers, and education community, including participation by parents.¹⁷
- 1.12 **Current government's plan.** To address these challenges, the Government of Panama approved the government's 2009-2014 Strategic Plan, which establishes the specific objective of guaranteeing quality equal education, to include: (i) universal early education; (ii) improved access to basic education; (iii) development of model schools;¹⁸ (iv) curriculum transformation; and (v) ongoing monitoring and evaluation. To carry out the plan, MEDUCA has initiated various activities supplementing the actions in this project, including:

¹⁵ Echeverría MEDUCA (2010). <http://www.slideshare.net/milanyis/transformacion-curricular1>.

¹⁶ Antúnez, S. (2006). Principios Generales de la Asesoría a los Centros Escolares. In: La asesoría a las escuelas. In Bonilla, R.O., Reflexiones para la mejora educativa y la formación continua de los maestros. Mexico, SEP, pp. 57-73.

¹⁷ World Bank. (2011). Learning for All: Investing in People's Knowledge and Skills to Promote Development: World Bank Group Education Strategy 2020.

¹⁸ Model schools will offer students a comprehensive education, including the use of gymnasiums, natural sciences laboratories, technology, and connectivity.

- (i) rehabilitation and expansion of basic education schools; (ii) planning of 15 model schools; (iii) a process to modernize the teaching career, specifically (in cooperation with the private sector, the University of Panama, and other teacher training entities) initial training curriculums are being updated; (iv) a process to update the teaching skills and content management of teachers who are currently teaching, including training of 33,000 teachers with Bank resources (see paragraph 1.20); and (v) a curriculum transformation that seeks to boost problem-solving skills, critical thinking, and the use of new technologies. Within the framework of the Strategic Plan, the Bank is helping to implement some of these initiatives through an operation now being executed (loan 2462/OC-PN), specifically in the indigenous comarcas.
- 1.13 To continue implementation of the Strategic Plan, the Government of Panama has sought the Bank's support to develop interventions aimed at increasing coverage and improving quality in basic education, particularly at the middle school level in targeted areas,¹⁹ through two areas of support: (i) design and construction of innovative school infrastructure; and (ii) updating and validation of school management and the basic and secondary education curriculum.
- 1.14 **Project strategy.** In supporting the Strategic Plan, the Bank maintains the approach it has adopted with Panama in the last few years in the context of the Bank's country strategy with Panama for 2010-2014, which seeks to: (i) improve quality and retention, and (ii) expand the coverage of education services, focusing its action on the indigenous comarcas. The goals of this operation will help to achieve the results of the country strategy, contributing to an increase in rates of coverage in middle and high school and increased retention of students up to ninth grade. In addition, this operation is included in the *Country Programming Document* (CPD 2012), which is part of the Operational Program Report (OPR 2012, GN-2661). This operation is also aligned with the targets of the IDB's Ninth General Capital Increase (GCI-9), specifically with poverty reduction and equity enhancement. It also falls completely within the framework of the Bank's Social Policy Strategy (GN-2588-3) in the priority area of improving the quality of schooling.
- 1.15 The proposed project will promote increases in coverage and improvements in internal efficiency through investments in innovative infrastructure and improvements in the management of schools and the relevance of the curriculum. A fundamental part of this strategy is improved educational access, efficiency, and relevance in the targeted areas, which currently have the worst coverage, grade repetition, and dropout rates. These investments are expected to contribute to improving student achievement.
- 1.16 **Increased coverage with innovative school infrastructure.** Based on the principles mentioned in paragraph 1.9, the Government of Panama has defined a new school model that will use infrastructure as an instrument for increasing school

¹⁹ The targeted areas encompass urban and rural areas, including indigenous comarcas, with high dropout rates.

- coverage in middle school and supporting implementation of the new curriculum approach. New physical facilities will allow students to have schools that offer the entire basic education cycle, from preschool to middle school. These facilities are also designed to promote collaborative learning processes, scientific experimentation, technological skills, and linguistic skills. Students will also have areas for extracurricular activities that encourage attendance and integrated student development. The government's plan is to build 15 model schools and this operation will finance two of them in areas with high dropout rates.
- 1.17 In addition, 20 primary schools will be expanded to offer complete basic education from preschool to middle school. These schools are located in communities with high dropout rates between the primary and middle school levels. As part of expanding the infrastructure and based on the model schools principles, schools will be given the classrooms needed to expand the supply to all levels of basic education, with natural science, computer, and language laboratories.
- 1.18 To provide specialized resources for students, teachers, parents, and the education community, the government plans to build 47 resource rooms in two model schools, 20 expanded schools, and an additional 25 basic education schools. The resource room will be a physical space that is permanent in nature; teaching guidance will be provided regarding curriculum modifications, use of material resources, learning strategies, and competencies-based education planning, and others. It has specialized resources for the functional achievement of all students.
- 1.19 **Updating of school and curriculum management.** As part of its objective to improve student achievement, MEDUCA has defined the new model school as an institution with educational services from preschool to middle school, that develops administrative and pedagogical management with the following characteristics: (i) it has management that leads and develops a strategic planning and organizational proposal in the service of learning; (ii) it covers a class schedule of eight hours per day and up to 1,400 per year; (iii) it develops a competencies-based curriculum program, including some bilingual courses (English-Spanish); (iv) teachers receive mentoring and support in the classroom and ongoing training and professional development; and (v) it includes a formative assessment process to provide individualized monitoring of student progress and teacher performance. The project will contribute to the development of these characteristics. Specifically, the curriculum will be updated and validated based on competencies and on basic courses such as Spanish, mathematics, and English; training sessions will be conducted for model school teachers and administrators; and teaching materials will be designed and distributed.
- 1.20 **Bank support in this sector in recent years.** The Educational Facilities and Learning Quality Program (loan 2462/OC-PN) was approved in 2010. It seeks to reduce socioeconomic gaps in the education system in order to increase the equity and quality of Panamanian education. The operation already disbursed 12% of the funds and 50% of the funds are committed. Within the context of the project, 33,000 teachers have completed training and curriculum guides have been

developed and distributed (the proposed project will supplement these activities by training 574 teachers and developing an additional 25 curriculum guides). The Bank also supported the Government of Panama in strengthening the education system through the Educational Development Project (loan 1013/OC-PN), which concluded in 2011. The objective of the reformulated project was to expand educational opportunities and improve learning conditions in vulnerable communities, particularly in rural and indigenous areas. The project expanded 14 primary and middle schools, offering educational services to more than 2,400 students who no longer have to travel to other communities to complete basic education.

B. Objectives, components, and cost

- 1.21 The objective of the operation is to help increase access to education through innovative school infrastructure and improvements in school and curriculum management. The specific objectives are to help facilitate student achievement through: (i) innovative infrastructure to improve and expand school facilities; and (ii) the creation of a school environment that fosters the use of student-centered teaching practices that use innovative school facilities and school management that coordinates the areas of curriculum, pedagogy, and administration. This is expected to help improve student achievement.
- 1.22 **Component 1. Innovative school infrastructure** (US\$70 million). Activities under this component seek to expand the education supply in existing educational centers through innovative school infrastructure and to build new model schools and resource rooms to ensure access to basic education in targeted areas. It will specifically finance: (i) the expansion, rehabilitation, and equipping of 20 primary school centers to include the middle school stage, and thus provide complete general basic education; (ii) the construction and equipping of two model schools, with a teaching model based on inquiry and innovative educational facilities; and (iii) the construction and equipping of 47 resource rooms to provide space to facilitate student achievement and supplement teachers' efforts through consultations, demonstrations, and didactic processes.
- 1.23 **Component 2. Updating and validation of curriculum and school management** (US\$10 million). This component will provide support for updating the curriculum from early education through middle school, particularly for use in innovative educational facilities. It will specifically finance: (i) the updating and validation of curriculum tools for teachers in the schools targeted by the operation, including teaching guides in mathematics, Spanish, English, natural sciences, and values; (ii) printing and distribution of educational materials, including curriculum tools, guides, and other teaching materials for teachers in these schools; (iii) training and monitoring of administrative and teaching staff in the areas of school management, teaching practices, and curriculum content, including 10 five-day workshops for 60 teachers, 24 two-days workshops for 14 administrators, and 12 five-day training sessions for 500 teachers; (iv) the design and supply of teaching materials needed for teacher performance and to put the new programs into practice; and

(v) technical assistance in the development of educational projects in schools, including technical assistance on the supervision and evaluation of teacher and institutional performance.

- 1.24 **Targeting.** For both components, targeting was based on the general criterion that the schools are located in areas with high dropout and poverty rates. For example, the rates of extreme poverty in the comarcas of Ngäbe-Buglé and Guna Yala are 91.7% and 64.6%, respectively, compared to a country average of 14.2%.²⁰ These include urban and rural areas and indigenous comarcas.²¹ Other criteria for the selection of schools included: (i) educational centers with capacity to accommodate their own enrollment; and (ii) schools that have available land and conditions for expansion.
- 1.25 **Costs.** The cost of the project is US\$80 million, US\$70 million of which will be financed by the Bank and drawn on the Bank's Ordinary Capital resources. The local counterpart is US\$10 million.

Table I-1. Itemized Budget (thousands of U.S. dollars)

Activities	IDB	Local	Total	%
1. Component 1. Innovative school infrastructure	67,200	-	67,200	84.00
1.1 Expansion to include the middle school level	37,800	-	37,800	47.25
1.2 Model schools	26,200	-	26,200	32.75
1.3 Resource rooms	3,200	-	3,200	4.00
2. Component 2. Updating and validation of curriculum and school management	-	10,000	10,000	12.50
2.1 Updating and validation of programs for teachers	-	1,400	1,400	1.75
2.2 Printing and distribution of educational materials	-	2,100	2,100	2.63
2.3 Training and monitoring of teachers and administrators	-	3,300	3,300	4.12
2.4 Design and supply of teaching supplies	-	3,000	3,000	3.75
2.5 Technical assistance for educational projects	-	200	200	0.25
3. Administration	500	-	500	0.63
4. Audit	200	-	200	0.25
5. Monitoring	75	-	75	0.09
6. Contingencies	2,025	-	2,025	2.53
Total	<u>70,000</u>	<u>10,000</u>	<u>80,000</u>	<u>100.00</u>
Percentage	87.50%	12.50%	100%	

²⁰ United Nations Development Programme - UNDP. (2010). Atlas of Human Development and Millennium Development Goals, Panama Atlas, 2010. The data on poverty in the Province of Panama generally do not reflect the reality of urban areas where the project will be implemented. There are no community level data for Panama City.

²¹ These regions include: Panama (Central Panama, West Panama, San Miguelito), two indigenous comarcas (Ngäbe-Buglé and Guna Yala), and four additional regions (Coclé, Colón, Chiriquí, and Los Santos).

C. Key results matrix indicators

- 1.26 Upon completion of the project, the following results associated with the two components are expected to be achieved: (i) increase the net rate of coverage in middle school education in the regions included in the project; and (ii) increase the retention rate in middle school in the regions where the project’s educational centers are located.
- 1.27 Under Component 1 on innovative school infrastructure, 10,000 new students are expected to be enrolled in primary education, middle school, and high school in the selected regions and comarcas. The new students enrolled include: students enrolled in middle school in the 20 expanded schools and students enrolled in model schools at the preschool to middle school levels. In addition, a total of 38,000 students are expected to benefit directly from the innovations and expansion of school infrastructure. In Component 2 on updating and validation of the curriculum and school management, the 47 schools covered by the project are expected to be using the updated, validated, competencies-based curriculum.

II. FINANCING STRUCTURE AND RISKS

A. Financing instruments

- 2.1 The project will be financed through an investment loan that will begin to be disbursed in 2013. The total loan amount is US\$70 million drawn on the Bank’s Ordinary Capital resources. The borrower will make a local contribution in the amount of US\$10 million. The Bank may recognize, as part of the local counterpart, expenses incurred under the project of up to a maximum of US\$60,000, provided they were incurred beginning on 1 April 2012 and substantially complied with requirements similar to those established in the loan contract. These expenses pertain to the process of reviewing the land for construction, which MEDUCA is conducting, which will enable it to move forward in a timely manner with program execution (see paragraph 3.13).The disbursement period is four years.
- 2.2 The disbursement schedule for the operation is expected to be as follows:

Table II-1. Disbursement Schedule (thousands of U.S. dollars)

	Year 1	Year 2	Year 3	Year 4	Total
TOTAL	15,000	20,000	25,000	10,000	70,000
%	21%	29%	36%	14%	100%

B. Environmental and social safeguard risks

- 2.3 According to the Environment and Safeguards Compliance Guidelines (OP-703), the project is classified as a category “B” operation due to the construction, expansion, and rehabilitation of basic education schools planned in the first component. From a social perspective, since some construction work will be done

in the indigenous comarcas, consultation procedures will be developed during project design and implementation in order to establish a common framework with community representatives regarding the scope of the works and services to be provided by the project. Thus, the corresponding [Environmental and Social Management Report](#) is submitted. With respect to the second component, positive social impacts are anticipated in terms of reduced dropout and improved student achievement.

C. Fiduciary risks

- 2.4 The evaluation of the institutional capacity of MEDUCA's National Projects Department (DNP), conducted in March 2012, rated procurement risk as medium primarily because current personnel have neither formal training nor experience in the Bank's procurement policies and procedures. Financial risk is low although the internal control system shows only incipient development and will thus have to be monitored periodically. Another fiduciary risk relates to the current government's ambitious investments plan, which may put strong pressure on future budget allocations for the ministries. In addition, project risks were identified and MEDUCA prepared a risk mitigation plan that includes, *inter alia*, implementing training sessions and strengthening the procurement area with at least one additional specialist and obtaining a high-level commitment from MEDUCA to manage resources with the Ministry of Economy and Finance and do appropriate project planning to support budgetary requirements.

III. IMPLEMENTATION AND ACTION PLAN

A. Summary of execution arrangements

- 3.1 Through the establishment of the DNP,²² MEDUCA has been executing the Educational Facilities and Learning Quality Program (loan 2462/OC-PN), which has been linked to the execution of other investment programs using local resources. The execution arrangements for this project are the same as those used for loan 2462/OC-PN, which has been well executed, with 50% of its funds contracted. The DNP is the entity responsible for project execution and will continue to liaise with the departments and technical and administrative units of MEDUCA involved in project execution. With respect to school infrastructure, some changes were made within the Ministry. These changes mandate increased responsibilities for the Engineering and Architecture Department in terms of monitoring and following up on the works.
- 3.2 The DNP will be responsible for the financial management of the project and will coordinate with MEDUCA's Finance and Institutional Development Department on the processing of project payments. The National Curriculum, Engineering and Architecture, and Special Education Departments will be responsible for the programming and technical execution of the project. They will also be responsible,

²² Executive Decree 552 of 18 July 2011.

- in coordination with the DNP, for preparing the terms of reference and specifications for goods and planned consulting services. The National Education Evaluation Department will be responsible for evaluation and the National Education Planning Department will be responsible for monitoring. MEDUCA also created a Strategic Management Committee that is chaired by the minister and comprised of the DNP and the MEDUCA Directors involved in the execution of loan 2462/OC-PN. This operation will be included in the committee's responsibilities. The committee's function is to approve the annual work plans and semiannual reports prepared by the DNP. The Operations Manual will specify the execution procedures and responsibilities of all participants.
- 3.3 The DNP will coordinate periodic meetings of the Strategic Management Committee, maintain communications with the Bank for all activities related to implementation of the loan, will be responsible for handling all project procurement and contracting processes, and will prepare project execution documents and reports as well as requests to the Bank for disbursements. The Operations Manual will specify the execution processes and responsibilities of all the participants. All proposed actions are in keeping with current legislation (Education Act—Law 47 of 1946).
- 3.4 **Procurement of goods and services.** The procurement of goods and services, works contracting, and the selection and contracting of consulting services will be handled in accordance with Bank Policies GN-2349-9 and GN-2350-9. Goods and works procurement using the shopping method will be subject to ex post review. Consultant selection and hiring will be subject to ex post review when consulting firms are contracted for less than US\$50,000 and individual consultants are contracted for less than US\$20,000.
- 3.5 **Disbursements.** Disbursements will be based on advances according to project needs as provided for in the Financial Plan.
- 3.6 **Audit.** Audited financial statements on the project will be required annually and will be submitted within 120 days of the end of the fiscal year and closing statements will be submitted within 120 days of the last disbursement. The audit will be performed by a firm of independent auditors acceptable to the Bank and in accordance with the provisions of Policy OP-273-2 and the document Guidelines for Financial Reports and External Audits of Operations Financed by the Inter-American Development Bank. Audit costs are part of the project cost and will be financed from loan proceeds.
- 3.7 **Special contractual conditions.** The following will be special conditions precedent to the first disbursement: **(i) that the Project Office has been assigned the**

necessary staff and capacities appropriate for project execution;²³ and (ii) that the project Operations Manual has taken effect.

B. Summary of agreements on results monitoring

- 3.8 **Cost-effectiveness evaluation.** The ex ante evaluation of the project indicates that the net present value (NPV) for the project in general, and for each of its components, is positive. Thus, in a conservative scenario, the project yields an NPV of US\$26.5 million, an internal rate of return (IRR) of 13.7%, and a benefit/cost ratio (B/C) of 1.30, with a 19-year period of return on investment. Although the project's efficiencies should be considered as a whole, 87.5% of the impact is associated with Component 1 and Component 2 contributes the remaining 12.5%. As a result of comprehensive actions in both components of the project, the performance of all students who attend these centers is expected to improve. Thus, anticipated effects include reduced grade repetition rates and dropout rates, better transitions between the last grade of primary school and enrollment in middle and high school. Also expected is a significant increase in educational progression to technical and university higher education that will allow the cohorts graduating from these centers to be better positioned for a productive life. The appreciation of MEDUCA's real estate assets and the benefits derived from community use of the new facilities are also taken into account.
- 3.9 Under the first component, given the planned investments, the current situation, and the useful life of the infrastructure, the revaluation of MEDUCA's assets, with values increasing 6.4 times (US\$48 million), stands out. The educational facilities to be created are expected to foster student-centered teaching methods that increase learning opportunities. Actions in the second component primarily affect grade repetition, so that the schools that participate in the project will be on average 10.9 times more efficient in terms of grade repetition compared with the situation without the project. This component is also expected to help reduce dropout rates and to lead to the use of a competencies-based and student-centered curriculum (see [Economic Analysis](#)).
- 3.10 **Monitoring, follow-up, and evaluation.** The objective of this activity is to closely follow up on project execution, monitoring achievement of goals both in terms of efficiency (actions that reach the beneficiaries and are of a quality consistent with their needs) and in terms of timeliness (actions occurring at times when they are actually needed). The information necessary for monitoring activities will be obtained primarily from: (i) administrative sources, including biannual reports at the school level collected by the Statistics Bureau of the Education Planning Department (DNPE); (ii) specific reports for the project to be produced by the DNP and MEDUCA's National Curriculum Department; and (iii) reports from external

²³ Appropriate capacities refer to an execution unit with at least the five positions listed in the Operations Manual: director, procurement specialist, education specialist, finance specialist, and monitoring and evaluation specialist.

supervisory firms.²⁴ To help increase efficiency in educational data production at the school level, the project will finance the procurement of equipment and training for the staff of the DNPE Statistics Bureau. Monitoring and follow-up will consist of half-yearly and yearly activities that include updating the database and reports on outcomes and outputs. The DNP will submit reports on project execution, including outputs, outcomes, costs, risks, challenges, and solutions, within 60 days after the conclusion of each six-month period.

- 3.11 Achievement of program outcomes in terms of increased coverage and retention will be monitored and the following dimensions will be evaluated: (i) a retrospective/reflexive evaluation (before and after) of the relationship between the new facilities produced in the project and teaching practice in the classroom, to determine whether the new model of school facilities has a direct impact on the behavior of teachers and students, as well as on student achievement. Classroom observation instruments will be used to do this, such as the Stallings method and the Classroom Assessment Scoring System (CLASS), among others. A survey will also be used to gather data from principals, teachers, and students on related factors. The measurement scales will be applied at the start of the project to the current universe of centers that will be subject to intervention, in order to establish a baseline, and then applied again upon the conclusion of the project to understand the differences produced by the project's investment; and (ii) an ex post economic evaluation of the project (ex post cost-benefit analysis) to determine whether converting primary schools into schools that offer complete basic education was more cost-effective than the current model based on transferring students to middle schools. The study will be based on a standard calculation of the cost/benefit ratio produced on the basis of the project. The evaluations will be financed with funds from technical-cooperation operation PN-T1083.
- 3.12 **Baseline.** The baseline for the retrospective/reflexive evaluation of the project will be designed during the second half of 2012 and the field work will be done during the last quarter of 2012. The ex post economic evaluation will utilize administrative data provided by MEDUCA and the results from the retrospective evaluation. The information obtained from the evaluations will reveal the characteristics of the educational institutions (infrastructure, human capital, and classroom characteristics, and other information), the teachers (sociodemographic characteristics and training, etc.), and their teaching practices.

C. Significant design activities after approval

- 3.13 **Review of parcels for construction.** In order to move forward in a timely manner with construction and expansion of the school infrastructure, MEDUCA has already begun the process of verifying that the parcels selected comply with all the conditions to be able to expand and build.

²⁴ The external firms will also be responsible for supervising the rehabilitation works. Their role is described in the Operations Manual.

Development Effectiveness Matrix Summary

Development Effectiveness Matrix			
Summary			
I. Strategic Alignment			
1. IDB Strategic Development Objectives		Aligned	
Lending Program	(i) Lending to small and vulnerable countries, and (ii) Lending for poverty reduction and equity enhancement.		
Regional Development Goals	Share of youth ages 15 to19 who complete ninth grade.		
Bank Output Contribution (as defined in Results Framework of IDB-9)	(i) Students benefited by education projects (girls, boys), and (ii) Teachers trained.		
2. Country Strategy Development Objectives		Aligned	
Country Strategy Results Matrix	GN-2596	(i) Increase of student retention to ninth grade, and (ii) Increase in coverage in grades 7 through 9 and 10 through 13.	
Country Program Results Matrix	GN-2661-1	The intervention is included in the 2012 Country Program Document.	
Relevance of this project to country development challenges (If not aligned to country strategy or country program)			
II. Development Outcomes - Evaluability		Highly Eevaluable	Weight
		9.4	Maximum Score
			10
3. Evidence-based Assessment & Solution		10.0	25%
4. Ex ante Economic Analysis		10.0	25%
5. Monitoring and Evaluation		7.5	25%
6. Risks & Mitigation Monitoring Matrix		10.0	25%
Overall risks rate = magnitude of risks*likelihood		Medium	
Environmental & social risk classification		B	
III. IDB's Role - Additionality			
The project relies on the use of country systems (VPC/PDP criteria)	Yes	The project relies on the use of Financial Management System (Budget), and Procurement System (Information System and Shopping Method).	
The project uses another country system different from the ones above for implementing the program			
The IDB's involvement promotes improvements of the intended beneficiaries and/or public sector entity in the following dimensions:			
Gender Equality			
Labor			
Environment			
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project			
The ex-post impact evaluation of the project will produce evidence to close knowledge gaps in the sector that were identified in the project document and/or in the evaluation plan.			

The program proposes to construct or re habilitate 20 schools of grades 7 through 9 added to elementary schools where supply is nonexistent, the construction of 2 excellence schools , the creation or rehabilitation of 25 classrooms to attend students with special needs, and to establish an evaluation system on the impact of infrastructure on student learning. The program also proposes to complement these interventions with a curriculum reform centered on the student and that allows students to explore infrastructure improvements in schools of excellence. The program also plans to print and distribute new programs in these schools. Teachers are planned to be trained and supported and receive didactic materials.

The diagnose is made on low coverage at grades 7 through 9 and 10 through 12 and low internal efficiency using historical data on enrollment provided by the Ministry of Education and the SINECA national test and the CERSE regional study. There is empirical evidence in other countries that a curriculum based on competencies tends to improve learning, improved infrastructure and that a better management of the school promoting collaboration among school constituents lead to better learning outcomes. The results matrix has a clear vertical logic, it has SMART indicators with baselines, targets and a clear plan for data collection. The proposed evaluation consists on a cost-benefitanalysis and a before-after comparison without attribution.

The main risks to executing are insufficient funds. The proposed mitigation action is the commitment by the Ministry of Education to administer the funds along with the Ministry of Finance and the design of a program plan sustaining budget needs.

RESULTS MATRIX

Project Objective	The objective of the operation is to help increase access to education through innovative school infrastructure and improvements in school and curriculum management. Specific objectives are to help facilitate student achievement by: (i) improving and expanding school facilities with innovative infrastructure; and (ii) creating a school environment that encourages the use of student-centered and participatory teaching practices using innovative school facilities.
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Outcome	Baseline (2010)	Final target (2016)	Observations
Net coverage rate in middle school education in the regions included in the project.	Panama – 70.6% Comarca Ngöbe-Bugle– 42.3% Comarca Guna Yala– 43.7% Coclé – 70.3% Colón – 75.3% Chiriquí – 73.7% Los Santos – 73.6%	Panama – 72% Comarca Ngöbe-Bugle– 44% Comarca Guna Yala– 45% Coclé – 71% Colón – 76% Chiriquí – 74% Los Santos – 74%	Given the size of the operation, the contribution to changes in level indicators at the selected region is positive but modest for generating significant changes. The net coverage rate is measured as the number of youth enrolled in middle school who are the official age for this level (12 to 14 years) as a percentage of the total population of that same age in the regions included in the project. The final target is in line with the Millennium goals for 2021 and MEDUCA policy. The source of measurement is MEDUCA, Statistics Bureau.
The school retention rate in middle school in regions where the project’s schools are located.	Panama – 86.3% Comarca Ngöbe-Bugle– 90.9% Comarca Guna Yala– 82.0% Coclé – 91.1% Colón – 90.4% Chiriquí – 91.4% Los Santos – 97.3%	Panama – 88% Comarca Ngöbe-Bugle– 91.5% Comarca Guna Yala– 83.5% Coclé – 91.5% Colón – 90.9% Chiriquí – 91.9% Los Santos – 97.8%	The retention rate is the percentage of youth enrolled in middle school who will continue to the next grade. Data provided by MEDUCA-Statistics Bureau.

	Base	Year 1	Year 2	Year 3	Year 4	Final Goal	Observations
Component 1: Innovative school infrastructure							
Outputs							
Number of model schools built	0	0	0	2	0	2	Model schools have physical facilities designed to encourage collaborative learning processes, scientific experimentation, technological and linguistic skills. In addition, they will have areas for extracurricular activities to encourage attendance and the comprehensive development of students. MEDUCA, DNP, report from external supervisory firms
Number of expanded and rehabilitated schools	0	0	20	0	0	20	The expanded/rehabilitated schools will offer complete basic education from preschool through middle school. The expansion/rehabilitation will include natural science, computer, and language laboratories and areas for extracurricular activities. MEDUCA, DNP, report from external supervisory firms
Number of schools with a resource room built to serve different learning needs	0	0	45	2	0	47	A resource room is a physical space intended to meet students' learning needs. This service is intended to be ongoing and guidance will be provided on curriculum changes, the use of material resources, learning strategies, and competencies-based education planning, etc. It has specialized resources for functional learning by all students. MEDUCA, DNP, report from external supervisory firms

	Base	Year 1	Year 2	Year 3	Year 4	Final Goal	Observations
Results							
Students enrolled in project schools.	0	0	0	8,000	2,000	10,000	Enrolled students include: students who enroll in middle school in the 20 expanded schools and students enrolled in model schools from pre-school through middle school levels. Basic data to be provided by Education Planning Department. MEDUCA, Statistics Bureau.
Number of students benefitted	0	0	0	36,000	2,000	38,000	Students benefitted are those who are attending the schools included in the project and who benefit from the new school facilities: middle school, laboratories, facilities that encourage learning, group work, and extracurricular activities. MEDUCA, Statistics Bureau.
Number of learning resource rooms in use	0	0	0	45	47	47	At the end of the project, each group is expected to have at least one assigned teacher. The room is considered to be “in use” when students and teachers use it on school days to improve learning. The administrator of each resource room will have a registry of attendance and use of the room. Using technical cooperation funds (PN-T1083), periodic visits will be made to the schools to verify/supervise the systematic use of the registry.
Component 2: Updating and validation of curriculum and school management							
Outputs							
Number of curriculum guides revised and/or reformulated at early, primary, and middle school levels	0	0	25	0	0	25	Teaching guides include the subjects of mathematics, Spanish, English, natural sciences, and values. Data provided by MEDUCA—Curriculum Department.

	Base	Year 1	Year 2	Year 3	Year 4	Final Goal	Observations
Number of educators trained to teach in new proposed curriculum	0	0	0	74	500	574	60 teachers in bilingual education (10 five-day workshops); 14 administrative (24 two-day workshops); and 500 basic education teachers (12 five-day workshops). Data provided by MEDUCA – Curriculum Department.
Number of sets of teaching equipment purchased for use by teachers and students	0	0	63	47	0	110	Two sets for the model schools; 47 for the resource rooms; and 61 notebooks for students. Data provided by MEDUCA – Curriculum Department.
Outcomes							
Number of schools using the competencies-based curriculum	0	0	0	45	47	47	Data provided by MEDUCA – Curriculum Department.

FIDUCIARY AGREEMENTS AND REQUIREMENTS

COUNTRY: Panama

PROJECT No./NAME: PN-L1072 – Innovation in School Infrastructure

EXECUTING AGENCY: Ministry of Education (MEDUCA)

PREPARED BY: Karina Díaz Briones, Procurement Specialist (FMP/CPN); and Juan Carlos Dugand, Financial Management Specialist (FMP/CPN)

I. EXECUTIVE SUMMARY

- 1.1 The fiduciary management assessment was carried out on the basis of visits conducted by the fiduciary specialists from the Country Office during the preparation of operation PN-L1072 and execution of loan 2462/OC-PN. In addition, the Institutional Capacity Assessment System (ICAS) was applied to the National Projects Department (DNP) of the Ministry of Education (MEDUCA). Based on this, procurement risk is medium and financial risk is low. However, the internal control system is at an incipient level of development that could affect risk levels in future and thus will require monitoring.
- 1.2 In the area of procurement, even though Panama has made significant progress, in recent years successive changes have been made to the legislation to expand the scope of competitive bidding to get better value and introduce flexibility in the use of direct contracting. The government is beginning to implement a program to strengthen the public procurement system, to be financed by the World Bank (*Project ID: P121492, Loan Number 8016-PA*). With respect to the use of this system, the Bank accepted the use of the website and validated the pilot use of the framework agreement for purchases under US\$50,000. With respect to national financial systems, a project module is being implemented for Panama's Integrated Financial Administration System (SIAFPA), which is being tested in loan 2568/OC-PN (PN-L1066) and could be used once the pilot tests are successfully concluded. The DNP has the PENTAGON system that will be used for financial control of the project.
- 1.3 The project does not include financing from other multilateral organizations.

II. FIDUCIARY CONTEXT OF THE EXECUTING AGENCY

- 2.1 The DNP, created by Executive Decree 552 of 18 July 2011, is executing the Educational Facilities and Learning Quality Project (EECA) (loan 2462/OC-PN) and many of its staff members at some point were involved in executing the

- Education Development Project (PRODE) (loan 1013/OC-PN), both financed with IDB funds.
- 2.2 The DNP is attached to the Executive Office of MEDUCA and is comprised of a Director, a Coordinator for each area (Technical-Pedagogical, Infrastructure, Procurement, Finances and Budget, and Programming, Monitoring and Evaluation) and Assistants in each of the coordinating offices.
 - 2.3 DNP technical staff, together with teams from MEDUCA's National Departments, Administration (Warehousing-General Services), Finances (Budget-Accounting), Legal Counsel (Contracting Unit), and Infrastructure, will attend to and drive the administrative and financial processes each component requires to carry out its activities. In addition, it will coordinate with the Curriculum, Special Education, Evaluation, and Teacher Training Departments on technical and pedagogical procedures.
 - 2.4 With respect to school construction, infrastructure coordination will be under the direction of the Institutional Coordinator of Infrastructure, who was assigned by the Executive Office under Resolution 1167 of 9 March 2012, and will have the following functions: (i) coordinating and monitoring works; (ii) approving and signing advances; (iii) keeping the Executive Office informed of the progress of the works; (iv) monitoring and complying with quality standards requested in the Terms of Reference for each project; (v) conducting tours; and (vi) leading meetings with contractors and other DNP staff on works-related activities.
 - 2.5 The DNP will liaise with the above-mentioned technical units of MEDUCA, providing services and supporting them to ensure timely procurement processes, handling of funds, performance of contractual, administrative, and financial commitments, accounting follow-up and project monitoring and evaluation. On this point, interdepartmental coordinating offices have been improving during execution of PRODE and EECA, as reflected in the completion of the first project and the level of commitments in the second, which has been under way for slightly more than a year.
 - 2.6 Even though there is improvement in terms of internal coordination, a significant weakness of the DNP is the Internal Control System, specifically with respect to manuals, procedures, and supervision and monitoring of activities. MEDUCA is the only ministry in Panama that continues to be exempt from prior control by the Office of the Comptroller General of the Republic (CGR) since March 2010 (recently renewed because there were no substantial findings). However, the DNP needs to implement effective internal control.

III. FIDUCIARY RISK EVALUATION AND MITIGATION MEASURES

- 3.1 In procurement, the risk is medium because the staff of the DNP's Coordinating Office for Procurement (coordinator and assistant) does not have formal training or experience in the Bank's procurement policies and procedures. In addition, the

- procurement procedures do not define a division of incompatible functions to allow a clear differentiation of the duties of staff participating in each of the various phases of the process (Contracting Regulations or the equivalent).
- 3.2 As a mitigating measure, personnel in this coordinating office must be trained. A Procurement Specialist must also be hired who has training and experience in the Bank's policies and/or the policies of international cooperation agencies. In addition, Contracting Regulations must be prepared specifying the duties, flow, and organization of internal procedures. Lastly, the level of contracting is intensive during the first year, so having specific support on this task and doing efficient bundling or bidding by lots will be required.
 - 3.3 Financial risk is low because staff has experience and has effectively managed the resources of executed projects. Audit opinions from recent financial statements have been clean, although they present some comments regarding internal controls. As already stated, these controls need to be strengthened, which coincides with the results for this subsystem in the ICAS.
 - 3.4 To begin to develop an internal control system in the DNP, management procedures should be improved and the corresponding manuals should be developed to allow adequate controls and balances. The audit contract will include an auditors' opinion regarding the effectiveness of the internal controls applied in project execution.
 - 3.5 The current government's investment plan is ambitious and includes priority projects like the Metro and expanding the Panama Canal. It is also taking on future payment commitments under the turnkey contract method, including supplier financing, which will put strong pressure on future budgetary allocations for the ministries, seeking to keep the budget deficit within the limits established by the Fiscal Responsibility Law.¹ This is a high risk that could affect project execution in the absence of an adequate budget.

IV. CONSIDERATIONS FOR THE SPECIAL CONDITIONS OF THE CONTRACT

- 4.1 In order to streamline contract negotiation by the project team and the legal department in particular, included below are those agreements and requirements that must be considered in the special conditions:
 - a. The Policies for Procurement of Goods and Works Financed by the IDB (document GN-2349-9) and the Policies for the Selection and Contracting of Consultants Financed by the IDB (document GN-2350-9) will be applied.
 - b. No exceptions to the use of Bank policies are anticipated.
 - c. Limits for international publicity in works, goods, nonconsulting services, and consulting services consistent with the country limits established by the FMP.

¹ Law 34 of 2008.

- d. Supervision of procurement in a mixed ex ante and ex post framework defined according to an institutional capacity assessment on procurement conducted on the executing agency and adjustable at the discretion of the Bank based on observed results.
- e. Initial Procurement Plan developed jointly with the Bank and, once the operation is approved, the first Procurement Plan will be developed using the Procurement Plan Execution System (SEPA).
- f. Audited financial statements on the project will be requested annually and prepared by an independent auditing firm. In addition, as an assurance service, an opinion will be sought from the auditors on the effectiveness of the internal controls applied in executing the project, with a cut-off date of 30 June of each year while the disbursement period remains in effect.
- g. There is exchange parity in Panama between the U.S. dollar and the balboa, so the exchange rate is irrelevant.

V. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT

- 5.1 The Fiduciary Agreements and Requirements for Procurement establish the provisions applicable for all procurement activity provided for in the project.

1. Procurement execution

- 5.2 Bidding procedures will be in accordance with document GN-2349-9 of April 2011 and consulting firms will be selected and contracted in accordance with document GN-2350-9 of April 2011.
 - a. **Procurement of works, goods, and nonconsulting services:** International competitive bidding (ICB) is to be conducted using the Standard Bidding Documents (SBDs) issued by the Bank. Bidding subject to national competitive bidding (NCB) and shopping (S) will be conducted using the models defined for this operation by the Bank. In addition, optional use of framework agreements is authorized for up to US\$50,000. Works will be opened for bidding with a conceptual design, and the final design and execution of the work will be required. Awards will be based on price, as has been done in the EECA project.
 - b. **Selection and contracting of consultants:** Consulting services contracts generated under the project will be executed using the Standard Request for Proposals (SRFP) issued by the Bank.
 - c. **Selection of individual consultants:** Consultants will be selected taking into account their qualifications for doing the work, based on a comparison of the qualifications of at least three (3) candidates.
 - d. **Operating expenses:** To be financed with the local contribution.
 - e. **Direct selections:** No provision for direct selection.
 - f. **National preference:** Not applicable.

2. Table of thresholds (US\$)

Works			Goods			Consulting Services	
International Competitive Bidding	National Competitive Bidding	Shopping	International Competitive Bidding	National Competitive Bidding	Shopping	International Publicity	Short List 100% National
Greater than or equal to US\$3,000,000	Greater than US\$250,000 and less than US\$3,000,000	Less than US\$250,000	Greater than or equal to US\$250,000	Greater than US\$50,000 and less than US\$250,000	Less than US\$50,000	Greater than US\$200,000	Greater than or equal to US\$200,000

3. Major procurement processes

Activity	Type of bidding	Estimated date	Estimated US\$ amount
Goods			
Provision of furnishings and equipment for schools to be constructed (20 school centers, 2 model schools, and 25 resource rooms)	ICB/NCB	APR/2013 APR/2014	3,400
Kitchen equipment (20 school centers, 2 model schools)	NCB/S	APR/2013 APR/2014	180
Laboratory equipment (20 school centers, 2 model schools)	ICB/NCB	APR/2013 APR/2014	2,100
Technological equipment (20 school centers, 2 model schools)	ICB/NCB	APR/2013 APR/2014	900
Methodological materials (20 school centers, 2 model schools, and 25 resource rooms)	ICB/S	APR/2013 APR/2014	900
Works			
Expansion, rehabilitation, and equipping of 20 school centers to include the middle school level and complete general basic education	ICB	OCT/2012	31,000
Design and construction of 2 model schools	ICB	OCT/2012	23,800
Construction of 25 resource rooms	NCB/S	JAN/2013	1,900
Firms			
Supervision of works (expansion of 20 school centers)	QCBS	SEP/2012	540
Supervision of works (2 model schools)	QCBS	SEP/2012	1,600

* To access the 18-month procurement plan, click [here](#).

4. Procurement supervision

- 5.3 The thresholds established for ex post review are applied based on the executing agency's fiduciary capacity to execute and may be modified by the Bank as such capacity changes. Only the procedures provided for in the Procurement Plan may be subject to post review. Direct contracting is always subject to ex ante review. Ex post reviews will be done every 12 months in accordance with the project's

Supervision Plan. Reports on ex post review will include a physical inspection visit, selected from the procurement processes subject to ex post review.

Ex post Review Thresholds

Works and Goods	Consulting Services
Shopping	Consulting firms involving amounts below US\$50,000. Individual consulting assignments involving amounts below US\$20,000.

5. Special provisions

5.4 None.

6. Records and files

5.5 The safekeeping and handling of contracting files is the responsibility of MEDUCA’s DNP, which will designate an employee specifically for this activity.

VI. FINANCIAL MANAGEMENT

1. Programming and budget

6.1 The Ministry of Economy and Finance is responsible for formulating and controlling the budget. Prior to July 31 of each year it will submit a budget bill to the National Assembly, which is responsible for approving it as well as any budget increase. The budget is an annual budget and includes all public sector investments, revenues, and expenditures. Due to the lead time with which the budget bill is prepared, numerous and significant changes are made to the budget, which thus loses validity as a planning instrument. All payments made by the public sector are recorded in the budget. Expenses to be incurred by the project are not included in the budget for fiscal year 2012, but no disbursements are expected to be needed during this time. As mentioned above, the budget allocation for upcoming fiscal years will be a critical factor in project execution.

2. Accounting and information systems

6.2 The SIAFPA was adopted as of 2000 as the official system for recording accounting and budget information. The SIAFPA includes the budget, cash flow, accounting, and public debt modules. A projects module was recently developed and is in the pilot stage under project PN-L1066 (loan 2568/OC-PN) and another complementary World Bank project. Once the pilot tests are successfully completed, this module could be used for financial control of the project. MEDUCA has the SIAFPA and another auxiliary application it has had trouble implementing. Project expenses are reported to the SIAFPA but various processes are not done automatically. This allow for errors, so the information recorded there is unreliable.

- 6.3 The DNP currently has the PENTAGON application, which is also used for execution of loan 2462/OC-PN, and was modified as needed to improve the planning required for the disbursement based on advances method, and will be used for this project as well, while tests are being completed on the SIAFPA projects module.
- 6.4 Accounting will be governed by the standards issued by the CGR. It is accrual based but not adapted to the International Public Sector Accounting Standards (IPSAS). Project financial statements will be required annually, including disbursements and cash flow.

3. Disbursements and cash flow

- 6.5 Panama does not use the concept of the single treasury account and there are more than 6,000 bank accounts in the National Bank. There is parity between the balboa and the dollar.
- 6.6 The IDB will transfer funds from an account designated for the project and opened at the National Bank by MEDUCA, as established by domestic legislation, and based on advances² covering funding requirements, according to the respective Financial Plan. Execution and financial control will be centralized by the DNP.
- 6.7 The initial financial plan indicates that no IDB-source disbursements will be required during 2012 and that US\$44 million will be needed in 2013. However, as mentioned above, there are strong pressures on the budget, so that the initial plan will be revised once the heading included in the budget bill for 2013, which is already being prepared, is known.

4. Internal control and internal audit

- 6.8 MEDUCA was exempted from the prior control exercised by the CGR in March 2010 and the resolution³ in which this measure is adopted imposes the condition that units overseeing the actions taken by the Ministry be retained. To comply with this resolution, MEDUCA created the National Compliance and Administrative and Financial Procedures Department, which is dedicated to oversight or control of all actions. Accordingly, prior control was assigned to that department instead of the CGR, without actually strengthening the Ministry's internal control system or generating a culture of self-control.
- 6.9 The DNP reflects the Ministry's situation, development of the internal control system is in the early stages, and internal control risk is substantial, according to the ICAS application. There is no risk valuation, no procedures or manuals establishing controls and balances, nor have functions or mechanisms been defined for staff to perform periodic evaluations of how the corresponding controls operate in their areas of responsibility. As a risk mitigation measure and in an effort to develop the DNP's internal control system, a survey of processes and related risks with their

² In accordance with the provisions of Policy OP-273-2.

³ Resolution 225 DFG.

respective controls should be performed, manuals of processes and functions should be established, and the respective personnel should be trained.

- 6.10 Despite the weaknesses of the internal control system of the DNP and MEDUCA in general, DNP financial area staff has properly handled the accounting and resources for the projects it has executed, so that the fiduciary risk in financial matters is rated low and the measures proposed seek to strengthen the internal controls, at least in the DNP.
- 6.11 MEDUCA also has an Internal Audit Department with the power to audit the DNP. However, it has never performed an audit of the DNP or the agency preceding the PRODE, which was the basis for creation of the DNP.

5. External control and reports

- 6.12 The CGR has focused its efforts on the prior control exercised over actions to dispose of government assets (MEDUCA is an exception). Its auditing function is weak and in this area it investigates complaints instead of executing an established audit plan. It therefore is not considered to have the capacity to perform external control of the project. The cost of the audit is estimated to be US\$50,000 per year and the audit will be performed by a level I independent auditing firm acceptable to the Bank. An annual opinion will be required on the financial statements of the project and, as an assurance service, an opinion will be required on the effectiveness of the internal controls applied to project procurement and payments, with a cut-off date of 30 June of each year, while the disbursement period remains in effect.

6. Financial supervision plan

- 6.13 Financial supervision will target the auditors' reports and the supporting documentation for disbursements will be reviewed on an ex post basis by the auditors or during the financial inspection visits to be conducted at least once a year.