Report Number : ICRR0020563

1. Project Data

Project ID	Project Name	
P106870	NI Comm. and Family Health Care Services	
Country	**Practice Area(Lead)**	**Additional Financing**
Nicaragua	Health, Nutrition & Population	P146880
L/C/TF Number(s)	**Closing Date (Original)**	**Total Project Cost (USD)**
IDA-48300,IDA-53680,IDA-H6220,TF-97259	30-Sep-2015	21,000,000.00
Bank Approval Date	**Closing Date (Actual)**	
07-Dec-2010	31-May-2016	

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	21,000,000.00	398,000.00
Revised Commitment	31,000,000.00	398,000.00
Actual	30,849,460.81	398,000.00

Prepared by	Reviewed by	ICR Review Coordinator	Group
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2. Project Objectives and Components

a. Objectives

As stated in the Financing Agreement and the Project Appraisal Document (PAD), the original objectives of the project were to: (i) improve the access to, and the quality of, preventive and promotion health and nutrition services among poor and vulnerable populations in the Recipient's territory; (ii) strengthen the operational capacity of the Ministry of Health (MOH) through the rehabilitation of health centers; and (iii) ensure financial support in case of a public health emergency.

An Additional Financing (AF) in January 2014 slightly modified the third PDO to read "(iii) ensure financial support in case of a public health alert or public health emergency." The declaration of a public health alert would allow the rapid mobilization of national resources in response to a foreseen public health situation, unlike the procedure to declare a public health emergency, which is governed by article 21 of Law No. 423, and entails more time for preparedness in case of an epidemiological health situation (Report No: 82587-NI). Since the project revised its objectives and also modified key outcome targets in 2014, a split rating will be performed (see Section 2e).

b. Were the project objectives/key associated outcome targets revised during implementation?
Yes

Did the Board approve the revised objectives/key associated outcome targets?
Yes

Date of Board Approval
23-Jan-2014

c. Will a split evaluation be undertaken?
Yes

d. Components
The project had three components as stated in the PAD:

Component 1. Expansion of Coverage of Health Services in the Target Municipalities and in the Indigenous Territories of Alto Wangki and Bokay (US$9 million at appraisal; US$12 million with AF at closure). This component aimed to finance capitation payments to ensure access by eligible beneficiaries to health services, through expanded coverage, standardization, and improved quality of health services, and implementation of the Community and Family Health Model (*Modelo de Salud Familiar y Comunitario* - MOSAFC, a new model based on provision of basic health and nutrition services focused on health promotion, prevention, and selective curative services; management of resources and supervision of services based on Municipal Health Networks (MHNs); and financial protection of all citizens, regardless of their contributive or noncontributive status). The 32 targeted municipalities were prioritized by the MOH according to the: (i) percentage of the population living in extreme poverty; (ii) percentage of pregnant women receiving four prenatal checkups; (iii) percentage of institutional births; (iv) average number of gestation months when women receive the first medical consultation; and (v) occurrence of maternal deaths (obstetric and non-obstetric).

Component 2. Institutional Strengthening of Ministry of Health, Rehabilitation of Health Care Networks and Contingent Financing of Public Health Emergencies (US$10 million at appraisal; US$16.8 with AF at closure). This component contained two sub-components:

Subcomponent 2.1. Institutional Strengthening, Rehabilitation, and Equipment for the Ministry of Health. This subcomponent was to improve the essential public health functions of the MOH and to rehabilitate

municipal and national health care facilities, and included:
(a) strengthening of the supervision and management capacities of the MOH and selected Local Systems of Integrated Health Care (*Sistema Local de Atencion Integral de Salud* - SILAIS) for the overall coordination, supervision, and implementation of the MOSAFC;
(b) acquisition of equipment and rehabilitation of facilities in the MHNs for the implementation and execution of the MOSAFC;
(c) replacement of medical and non-medical equipment required to re-establish the operating capacity of Nicaragua's National Health Networks;
(d) establishment of two regional repair units for medical and non-medical equipment to serve the immediate repair needs of SILAIS and MHNs; and
(e) implementation of the Indigenous Peoples' Planning Framework (IPPF) to ensure that health services are culturally adapted to the needs and practices of the relevant Indigenous Peoples communities.

Subcomponent 2.2. Establishment of a Contingency Fund for a Public Health Emergency. This subcomponent was to facilitate the use of critical resources in the event that a public health emergency (and, post-restructuring, also a public health alert) was officially declared through a Health Ministerial Resolution. Financing was intended to be disbursed once a Public Health Emergency had been declared by the MOH.

Component 3. Strengthening of Ministry of Health's Capacity to Administer, Supervise and Evaluate the Implementation of Health Services (US$2 million at appraisal; US$2.2 million with AF at closure). This component aimed to strengthen the Ministry of Health's capacity for administering, supervising and evaluating the activities referred to in Component 1, including carrying out an internal technical audit, an external annual technical audit to validate the number of eligible beneficiaries receiving services and the achievement of performance goals, the annual project external financial audit, and the 2011 Nicaraguan Demographic and Health Survey (*Encuesta Nicaragüense de Demografía y Salud*).

Revised components

Project components were revised during the 2014 AF in order to better support the expansion and scaling up of the project.

Component 1: The financing of capitation payments covered 34 new municipalities. The project ended up supporting 66 municipalities, which accounted for 43% of total municipalities in Nicaragua.

Component 2: Subcomponent 2.1 added new activities: (f) the implementation of hospital waste management plans in selected hospitals; and (g) the carrying out of repair and maintenance activities of medical and non-medical equipment. A new subcomponent (2.3) was also added, contributing to the attainment of the Millennium Development Goal (MDG) 5 -- Improve Maternal Health -- with emphasis on adolescent health, and the sexual and reproductive health of women between 10 and 64 years of age. This subcomponent aimed at strengthening the MOH's capacity to implement the National Sexual Reproductive Health Strategy and to develop a cervical cancer prevention program.

Component 3: Activities were added to support the analysis and dissemination of the results of the Nicaraguan Demographic and Health Survey.

e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project Costs: Original project costs were estimated at US$ 21 million. In 2014, the project was scaled up to expand health service provision to additional municipalities. Total project costs amounted to US$ 31 million at project closure.

Financing: Originally, project costs were financed through an International Development Association (IDA) Grant of US$ 11 million, and an IDA Credit of US$ 10 million. In January 2014, an AF was approved for US$10 million (IDA Credit 53680). The AF was an expression of the Government's interest to extend the benefits of the project to other poor municipalities. Additional needs related to the institutional strengthening of the MOH and SILAIS were supported by five trust funds, four Bank-executed and one Recipient-executed, with an actual disbursement of US$630,800.

Borrower Contribution: There was no borrower contribution.

Dates: The project was restructured five times over the course of its implementation.

1) In December 2012, the project underwent a full level 2 restructuring that dropped one PDO indicator from the Results Framework and added other indicators to better measure the provision of health care and align the indicators with official data from the National Statistical System (Report No: 71701-NI).

2) In January 2014, an Additional Financing (AF) was approved to finance the costs associated with scaling up of the project. The original project included 32 municipalities, and the AF added 34 new municipalities. The restructured project also added institutional strengthening activities at the national and local levels to contribute to progress toward achieving MDG5, modified Objective 3, and revised PDO indicator targets in the Results Framework (Report No: 82587-NI).

3) In September 2014, the project underwent a full level 2 restructuring to reallocate funding among categories in response to a public health alert declared in the country associated with chikungunya fever.

4) In March 2015, another restructuring extended the Closing Date to January 29, 2016.

5) In December 2015, a final restructuring extended the Closing Date to May 31, 2016.

The restructuring with AF in January 2014 introduced changes in one project objective and outcome targets, warranting a split outcome rating. The project objectives will be assessed in two phases weighted by disbursement shares: i) from appraisal to Jan 2014; and ii) from Jan 2014 to closing date.

3. Relevance of Objectives & Design

a. Relevance of Objectives

The project's objectives were highly relevant during the entire project life. Access, quality, and utilization of health care services by poor and vulnerable populations remain a development challenge in Nicaragua. Geographic barriers to access, lack of essential medicines, and perceptions of poor quality hinder the uptake of health services by the most vulnerable populations. The MOSAFC community health model, implemented by the government since 2007, follows Nicaragua's Primary Health Care Strategy and ensures free, universal access to health care services. MOSAFC focuses on health promotion and disease prevention for mothers and children, indigenous groups, adolescents, and senior citizens. Thus, the objectives were closely aligned with the government's National Human Development Plan (NHDP) 2009–2011, which emphasized the importance of preventive health care services in improving maternal health (MDGs). The objectives were also consistent with the World Bank's Country Partnership Strategy in effect at appraisal (FY2008–2012), which underlined the need for pro-poor investment in delivery of basic services in Nicaragua, and at closure (FY2013–2017), which focuses on improving maternal and child health, including reducing chronic malnutrition, through support to the new community and family health model.

Nicaragua has endured epidemiological emergencies in the past, such as the A/H1N1 flu pandemic and dengue epidemic, that have strained the financial and institutional resources of the government and have threatened gains in poverty reduction (PAD, p. 1). The project's third objective, although framed in terms of inputs (availability of funds), was also relevant from a financial protection perspective, and the contingent fund allowed for the government's rapid response in the event of a public health emergency.

Rating	Revised Rating
High	High

b. Relevance of Design

The activities proposed by the project were logically linked to its objectives. Project activities focused on financing capitation payments linked to results to ensure the provision and availability of preventive health services. About 20% of the capitation amount was to be disbursed according to the quantity of services provided, and another 20% according to quality targets. This performance-based approach to financing MHNs provided incentives to improve coverage and quality of health services. In addition, MHN staff with satisfactory annual evaluations had the opportunity to participate in career training (i.e. training on national protocols regarding management of pregnancy, childbirth, HIV/AIDS and chronic diseases), obtain promotions where available, and access additional benefits such as improvements in basic equipment and facility upgrades for their entire health teams.

To further improve quality of services and strengthen the operational capacity of the MOH, the project design included the rehabilitation and upgrading of medical and non-medical equipment of health facilities, the establishment of regional maintenance centers, staff training, and improvements in hospital waste management. Quality improvements were expected to result in increased demand for health care services and

thus increase effective coverage. The government's interest in expanding the benefits of the project to other poor municipalities led to the AF in 2014. Once the project was closed, the government extended the capitation financing modality to all municipalities in the country, keeping the project design relevant beyond the project life.

Rating	Revised Rating
Substantial	Substantial

4. Achievement of Objectives (Efficacy)

Objective 1

Objective

Improve the access to, and the quality of, preventive and promotion health and nutrition services among poor and vulnerable populations in the Recipient's territory.

Rationale

Outputs:

The project financed the provision of health promotion and disease prevention services in a total of 66 selected municipalities, using a results-based approach based on capitation payments linked to performance targets. Agreements (*Acuerdos Sociales por la Salud y el Bienestar – ASSBs*) between the SILAIS and MHN encompassed 4 functional areas: i) stewardship role of MOH; ii) health service provision function of SILAIS; iii) management of health services and allocation of physical and financial resources among health units; and iv) and citizen participation/social audit (ICR, p. 29).

Regarding the latter, the project supported biannual participatory meetings of Citizen Councils, who were responsible for monitoring: i) the provision of health services, ii) the achievement of health indicator targets, and iii) the efficient use of funds. These ASSBs developed by the project were later implemented in the rest of municipalities not reached by the project, thus being a positive unintended result of the project.

Activities towards improvement of quality of services included:
- The development and implementation of the National Strategy for the Integral Development of Adolescent Health (2012-2017).
- Training of health staff in the following areas: cito-technology (50 staff); basic colposcopy technique (18 staff); integration between traditional and Western medicine (1803 staff); internship program in cervical cancer prevention (7 staff).
- A diagnostic on traditional medicine and its integration with health systems, and development of a guideline on integration between traditional medicine and Western medicine.
- Training for health unit managers (39 participants) in comprehensive care of adolescents.
- 108 events in maternal houses to train 916 adolescents in reproductive health.

Intermediate outcomes:

In the 32 original project municipalities:
- The percentage of pregnant women receiving four prenatal checkups in targeted MHNs increased from 50% at baseline to 74%, almost achieving the original target of 75%.
- The percentage of institutional deliveries in targeted MHNs increased from 72% at baseline to 93% in 2016, exceeding the original target of 90%.
- The percentage of post-partum women receiving postnatal care within ten days of delivery in targeted MHNs increased from 32% at baseline to 65% in 2016, exceeding the original target of 55%.
- The percentage of children less than one-year-old immunized with the Pentavalent vaccine in targeted MHNs achieved full coverage (100%) in 2016, exceeding the original target of 98.5%.

At the 2014 AF restructuring, new targets were set for the 34 additional municipalities. Moreover, some indicators had disaggregated sub-targets (AF1 and AF2) to account for different baseline values. Intermediate outcome indicators in the additional municipalities evaluated at the 32 original municipalities' targets show that:
- The percentage of pregnant women receiving four prenatal checkups decreased from 74% in 2012 to 70% in 2016, not achieving the original target of 75%.
- The percentage of institutional deliveries increased from 73% in 2012 to 78% in 2016, but it did not achieve the original target of 90%.
- The percentage of post-partum women receiving postnatal care within 10 days of delivery increased from 50% in 2012 to 73% in 2016, exceeding the original target of 55%.
- The percentage of children less than one-year-old immunized with the Pentavalent vaccine achieved 97% coverage in 2016, but it was not sufficient to meet the original target of 98.5%.

Outcomes:

The original PDO indicator was replaced by several outcome indicators related to access to health care services and to behavior change among adolescents:
- In 2016, the percentage increase in first time consultations provided during the year was 29% in the original municipalities, 31% in group 1 of additional municipalities (AF1), and 26% in group 2 of additional municipalities (AF2), all exceeding the original target of 20%.
- The percentage increase in follow-up health care consultations provided during the year by each health facility in 2016 reached 32% in the original municipalities, and 69% in group AF1 and 74% in group 2 of the additional municipalities (AF2), all exceeding the original target of 30%.
- The pregnancy rate among adolescent women decreased from 27.5% in 2009 to 24% in 2016 in the original municipalities, and 22% in the 34 additional municipalities, exceeding the original target of 25.5%.

The project's original municipalities achieved most of the original outcome targets. The additional municipalities also met most of the original outcome targets. The intermediate outcome and outcome indicators reasonably measured quality of health care services, access, and utilization. Therefore, despite the lack of data on a control group of municipalities not supported by the project, it is plausible that the observed increases in access and quality are a result of the project's activities. Poor and vulnerable

populations were effectively selected through the targeting strategy that chose participating municipalities.

Rating
Substantial

Objective 1 Revision 1

Revised Objective
This project objective did not change during the project's lifetime. However, one PDO outcome target was revised, and new targets were introduced in 2014 AF for the additional municipalities.

Revised Rationale
Intermediate outcomes:

In the additional municipalities:
- The percentage of pregnant women receiving four prenatal checkups decreased from 74% in 2012 to 70% in 2016, not achieving the revised target of 76%.
- The percentage of institutional deliveries increased from 73% in 2012 to 78% in 2016, exceeding the revised target of 75%.
- The percentage of post-partum women receiving postnatal care within ten days of delivery increased from 50% in 2012 to 73% in 2016, exceeding the revised target of 55%.
- The percentage of children less than one-year-old immunized with the Pentavalent vaccine achieved 97% coverage in 2016, slightly exceeding the revised target of 96%.

A new intermediate indicator showed that:
- The percentage of health units with inter-sectoral plans for comprehensive development of adolescent health in all project municipalities reached 56%, exceeding the 2014 target of 25%.

Outcomes
- The percentage increase in first-time consultations during the year changed from 5% in 2012 to 31% in 2016 for group AF1 of additional municipalities, and from 14% in 2012 to 26% in 2016 in group AF2. Both groups exceeded the revised targets of AF1 9% and AF2 18%.
- The percentage increase in follow-up health care consultations during the year by each health facility also exceeded the revised targets (AF1 32%; AF2 51%). For group AF1 it increased from 23% in 2012 to 69% in 2016, and for group AF2 from 47% in 2012 to 74% in 2016.
- The pregnancy rate among adolescent women declined to 24% in 2016 in the original municipalities, achieving the less ambitious revised target of 27%. For the additional municipalities, the pregnancy rate among adolescent women declined to 22% in 2016, exceeding the revised target of 25%.

Revised Rating
High

Objective 2

Objective

Strengthen the operational capacity of the MOH through the rehabilitation of health centers.

Rationale

Outputs:

The Project strengthened the operational capacity of the MOH and the SILAIS by signing and maintaining health management agreements between the SILAIS and the municipalities, providing medical and nonmedical equipment to the SILAIS, implementing mobile regional maintenance centers for medical equipment, and establishing health waste management processes in selected hospitals. It also provided training for health network personnel, including in areas such as management and supervision.
-Medical equipment was purchased and installed in 9 SILAIS, 35 health centers, 133 health posts, and 36 hospitals (180% achievement of planned outputs).
-Non-medical equipment was purchased and installed in 3 SILAIS and 9 hospitals (100% achievement of planned outputs).
-Preventive and corrective equipment maintenance was established in 12 hospitals and a National Maintenance Center.
-288 staff were trained on preventive and corrective maintenance of medical equipment during 7 training events, which exceeded the target of 45 staff trained at 2 events.
-176 maternal houses were furnished and equipped.
-The National Household Survey in Demography and Health (ENDESA) was implemented.
-4 project technical audits and 5 financial audits were conducted.
-Health staff were trained in the following areas: hospital management (159 staff); project M&E (40 staff); advanced MS Excel software (75 staff); communicative English (25 staff); environmental health (4050 staff in 9 SILAIS); and hospital waste management (staff in 9 hospitals).

Intermediate outcome indicators show that:
- By 2016, 9 hospitals had implemented the waste management plan satisfactorily, exceeding target of at least 3.
- 2 mobile regional maintenance centers for medical and nonmedical equipment were implemented, achieving the target.

In the original municipalities:
- All evaluated ASSBs were assessed as satisfactory by social consultations, exceeding the 85% original target.
- 12 hospitals in the national health networks and 32 municipal health networks completed the process of replacing medical and nonmedical equipment required to re-establish operating capacity, achieving the original targets (12 hospitals and 32 MHNs).

In the additional municipalities:
- All evaluated ASSBs were assessed as satisfactory by social consultations, exceeding the original and revised targets (of 85% and 75%, respectively).

- 16 hospitals in the national health networks and 34 municipal health networks completed the process of replacing medical and nonmedical equipment required to re-establish operating capacity, achieving the original and revised targets.

A new intermediate indicator showed that:
- None of the target municipalities implemented more than 50% of their health care quality improvement plans by the project closing date (targets were set at 20 original and 17 additional municipalities). The ICR explains that municipal plans were included in a national strategic plan for quality that is part of a Bank-financed follow-on project (Nicaragua Strengthening the Public Health Care System, P152136).

Outcomes:

- In 2016, 78% of the ASSBs evaluated by the MOH in original municipalities were in compliance according to an external audit, not achieving the target of 85%. However, additional municipalities achieved the original target.
- Ninety-one percent of the original municipalities and 85% of the additional municipalities met at least 7 of 10 performance goals established in their ASSBs (e.g. institutional delivery rates), achieving the original target of 85%. According to the borrower's comments (ICR, p. 86), the few municipalities that underperformed targets experienced shortcomings such as large geographic distance to health facilities (demand barrier); understaffed health units (health system capacities); and mismatch of population data provided by INIDE and the actual population (HMIS).

Rating
Substantial

Objective 2 Revision 1
Revised Objective
This project objective did not change during the project's lifetime, but outcome targets were revised to account for municipalities added at the 2014 AF.

Revised Rationale
Outcomes:

- In 2016, 85% of the additional municipalities had evaluated ASSBs that were in compliance according to an external audit, exceeding the 2014 target of 75%.
- 85% of the additional municipalities met at least 7 of 10 performance goals established in their ASSBs, achieving the revised target of 84%.

Revised Rating

Substantial

Objective 3

Objective

Ensure financial support in case of a public health emergency.

Rationale

Outputs:

The project created a contingency fund for a public health emergency to enable the MOH to draw on these resources in the event a health alert was activated.

Outcomes:

According to the ICR, one sanitary alert related to dengue fever was successfully managed in 2012, one related to chikungunya in 2014, and one related to chikungunya and dengue in 2015, triggering the Bank to disburse a total of US$2.5 million from project funds (US$1 million for the 2012 and 2014 alerts, and US$ 0.5 million for the 2015 alert). The ICR states that the fast use of funds prevented disease that could have reached a significant percentage of the population, and that the government had all appropriate mechanisms in place to issue these sanitary alerts.

The original project lacked a formal PDO-level indicator to measure achievement of this objective.

Rating

Substantial

Objective 3 Revision 1

Revised Objective

The AF in January 2014 slightly modified this objective to read “(iii) ensure financial support in case of a public health alert or public health emergency."

Revised Rationale

Outputs and Outcomes are as stated above.

The ICR added an indicator to measure achievement of the revised third objective:

- 100% of government requests for financial support, in case of a health alert or public health emergency, were fulfilled.

The government considers that the World Bank financing contributed efficiently to put in place public health actions to prevent a rise in the number of dengue and chikungunya cases and prevent related mortality (ICR, p. 67).

Revised Rating
Substantial

5. Efficiency

Cost-effectiveness: Three cost-benefit analyses (CBA) were conducted at project design, AF, and at project completion.

The ex-ante CBA was based on a subset of project costs and measurable economic benefits resulting from components 1 and 2a. The expected project benefits included in the analysis were: **(1) Reduction in maternal and infant deaths**: Based on international literature on the effect of preventive care on maternal and child health (also used in the CBA of the Bolivia project P101206), the CBA assumed that about 20% of deaths would be avoided, and that 25% of nationwide live births would occur in project target areas. The monetary value of a life saved was estimated by lifetime earnings based on the average gross national income per capita in 2008 (US$1080), an employment rate of 38% for mothers, and a life work span of 32 years. Similarly, the income stream for children accounted for 60 years (with zero income during the first 12 years), but did not consider the employment rate. The CBA estimated that the project would avert 8 maternal and 245 child deaths through 2020. **(2) Cost savings in purchasing new medical and nonmedical supplies** resulting from the creation of regional maintenance centers, assumed at 0.7% of the MOH budget by the end of the project's lifetime (about US$1.39 million, of a total public health budget of US$199.6 million). **(3) Cost savings in MOH drug expenditures** of 0.4% due to the shift in service delivery focus from curative to preventive services. **(4) Cost savings from decentralization**, assumed to be 1% of the MOH budget.

On the cost side, the analysis included the costs of components 1 and 2a over four years, and also recurrent costs that the MOH was expected to assume after project completion, estimated at 14% of total project investments. The results of the CBA at appraisal indicated that the project had a NPV of US$196,804 (using a discount rate of 12%), US$828,453 (using a discount rate of 10%), and US$ 1.55 million (using a discount rate of 8%), and an IRR of 13%.

The analysis does not provide a strong justification for the assumptions of cost savings (benefits 2-3-4). A back-of-the-envelope calculation suggests that maternal and infant deaths avoided account for only 23% of the present value of total benefits (US$17,426,970). On the other hand, not all project costs were considered, so results could be overestimated.

The CBA of the project's AF also considered the AF costs and benefits generated under Components 1, 2.1, and 2.3. Like the ex-ante analysis, this CBA included: **(1) the economic benefits of maternal and child deaths avoided** (assuming that project areas covered 20% of 2011 live births, that project interventions would avoid 20% of maternal and child deaths, an average annual income of US$1560, and an employment rate of 46% of mothers). But unlike the PAD, the AF analysis also included: **(2) savings in household health expenditures** due to increased health care coverage, estimated at US$18 per capita per year (equivalent to a full package of health care services). The inclusion of this benefit, however, did not seem to be consistent with the PAD's counterfactual scenario, i.e. in the absence of the project, the MOH would have still provided the

package of services with a greater emphasis on outpatient and curative services (without the additional component of promotion and prevention) (PAD, p. 51). Finally, the AF analysis also considered: **(3) savings in maintenance costs** resulting from investments in advanced new equipment, ranging from 2.5% to 0.5% of the investment over the first five years. This element appeared to counter the benefit of switching expensive new equipment purchases for cheaper equipment repairs, as suggested by the PAD's CBA.

The AF CBA included direct investment costs of component 1 (US$3 million = US$3.6 x 415,380 beneficiaries in two years), components 2.1 and 2.3 focusing on investment in fixed assets (US$ 6.8 million), and MOH recurrent costs estimated at 14% of total investments. Assuming a lower discount rate of 10%, the NPV of the AF was US$17,837,000, and the IRR was 20%.

The CBA at completion included maternal and child deaths averted; excluded costs savings in public expenditures related to equipment repair, drug expenditures, and decentralization efficiencies (because those savings did not occur); and included a reduction in medicine and consultation expenditures for 60% of households in the poorest income quintile for a total of US$12,351,678 and US$5,504,856, respectively. The estimated NPV is US$4.4 million or US$12.2 million (discount rate not reported), and the IRR is 8% or 13.5%. according to scenarios based on different time horizons. Since different benefit categories were considered, these results are not strictly comparable to the analyses at appraisal and AF.

Despite the CBA's optimistic results, it should not be surprising that interventions designed to reach remote areas tend to be more costly, ceteris paribus benefits. Yet modest value for money results should not prevent the Bank from investing in those areas, provided that the proposed intervention is the least-cost option.

Other aspects of efficiency: Project preparation was handled in an efficient manner. Preparation and appraisal took eight months from concept review to appraisal (a relatively short time frame compared with the 18-month average for a typical HNP project), the project became effective four months after Board approval, and the first disbursement took place one month after effectiveness.

The project's efficiency increased over time in terms of improvements in the cost-beneficiary ratio. While the AF restructuring doubled the scope of the project, total costs increased less than proportionally (by 47%, from US$ 21 to 31 million). The project executed and disbursed 150% of the original grant and credit amounts with only eight months of extension from the original closing date, to allow sufficient time for the government to complete the full installation and operationalization of medical and nonmedical equipment procured with the AF. The ICR does not report shortcomings related to implementation efficiency.

Efficiency Rating

Substantial

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)

Appraisal	✓	13.00	0 ☑Not Applicable
ICR Estimate	✓	8.00	0 ☑Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

Original objectives and original outcome targets (approval-Jan 2014): Satisfactory. Relevance of objectives and design are rated high and substantial, respectively. All three objectives were substantially achieved, and efficiency was substantial.

Revised objectives and revised outcome targets (Jan 2014-closing): Satisfactory. Relevance of objectives and design remain the same. One objective was highly achieved and the other two substantially achieved. The efficiency rating remains Substantial.

These ratings are indicative of minor shortcomings in the project's preparation and implementation under both the original and revised objectives/targets, and therefore an overall Outcome rating of Satisfactory.

Restructuring Periods	**Original (approval-Jan 2014)**	**Revised (Jan 2014-closing)**
Relevance		
Objectives	High	High
Design	Substantial	Substantial
Efficacy		
Objective 1: improve access and quality of services among the poor and vulnerable	Substantial	High
Objective 2: strengthen operational capacity of MoH through rehabilitation	Substantial	Substantial
Objective 3: ensure financial support in case of public health emergency/alert	Substantial	Substantial
Efficiency	SUBSTANTIAL	SUBSTANTIAL
Outcome Rating	**SATISFACTORY**	**SATISFACTORY**

a. Outcome Rating

Satisfactory

7. Rationale for Risk to Development Outcome Rating

The risk to development outcome is considered low. Project outcomes are likely to be sustained in the future based on the following factors.

First, the government has scaled up the capitation payment model at the national level by establishing ASSB agreements with all 154 municipalities, thus showing a strong commitment to the project's design. The same performance indicators developed under the project to measure MHN compliance are being used nationwide. Innovations in terms of a culture of results introduced by the project are now part of the institutional structure of the central, regional, and local health systems in Nicaragua.

Second, the adoption of a standard set of 25 performance indicators to monitor and evaluate progress in all internal and external projects, as well as regular meetings with the donor community, will continue to increase coordination among multilateral agencies to maximize the effectiveness of support for the country's health sector.

Third, the government continues to receive support from the World Bank. In 2015, a new operation was approved (Nicaragua Strengthening the Public Health Care System, P152136) aiming at further strengthening access and quality of health services, adapting the public health system to the country's changing epidemiological profile, and securing financial support in case of a public health alert or public health emergency.

a. Risk to Development Outcome Rating

Negligible

8. Assessment of Bank Performance

a. Quality-at-Entry

Originally, the project was designed as the third phase of an Adaptable Program Loan (APL), but during preparation the lending instrument was changed to a stand-alone Specific Investment Loan without modifying the development objectives. Project preparation was done in a relatively short time compared to other projects in the health sector, and the project became effective soon after approval. Key lessons were learned from previous health sector projects in the region (PAD, pp. 11-12), particularly related to the incentive structures created by capitation payments and performance agreements, and risk analysis was sound and appropriate mitigation measures identified through an Operational Risk Assessment Framework (PAD, Annex 4). Implementation arrangements (including for M&E) involving MOH, SILAIS, and MHNs were well specified.

However, the project's results framework was incomplete, as it lacked a PDO indicator to measure achievement of objective 3. Also, as acknowledged in the ICR, the original project design did not take into account recommendations resulting from the Quality Enhancement Review related to the need to expand the scope of the project, specify performance targets to evaluate agreements, and establish coordination mechanisms with other donors. These recommendations were addressed later during implementation, including the redefinition of the results framework to better measure achievement of the project's objectives.

Quality-at-Entry Rating
Moderately Satisfactory

b. Quality of supervision
The ICR states that the project task team conducted 12 implementation support visits to Nicaragua and maintained regular communications with the country team to provide technical assistance in areas such as financial management, safeguards, and general operational aspects of the project. The ICR also highlights the stability and skills of the World Bank task team as crucial for developing mutual confidence with the implementation unit and achieving efficient implementation of project activities.

During implementation, project supervision reports rated overall progress toward achievement of the PDOs as satisfactory. The project's mid-term review identified areas that could be improved, such as the need to adjust the value of the capitation payments through a costing exercise; an action plan to improve the quality of health services; a maintenance strategy for equipment and corresponding training; and a technical audit to verify performance targets and corroborate that monetary incentives were being implemented satisfactorily. Appropriate action was taken on these recommendations. The project task team supervised compliance of the social and environmental safeguards.

Quality of Supervision Rating
Satisfactory

Overall Bank Performance Rating
Moderately Satisfactory

9. Assessment of Borrower Performance

a. Government Performance
The government's commitment to the project was reflected in active participation of MOH authorities in preparation and design. The government maintained open dialogue with stakeholders, and several consultations (including with indigenous people) took place during project preparation, enriching project design. The AF was an expression of the interest of the government to extend the benefits of the project's design to other poor municipalities.

Sufficient human resources were deployed to implement and monitor project activities and manage financial

resources. The government invested in strengthening staff capabilities as needed. Regular meetings with project implementing units were held to evaluate progress and provide technical assistance. There was effective coordination within the MOH to accelerate approval and implementation processes as necessary, and a technical committee was established to facilitate collaboration between central and local project implementing units and the SILAIS.

Government Performance Rating
Satisfactory

b. Implementing Agency Performance
The implementing agency was the Department of Planning and Development (*Dirección General de Planeación y Desarrollo*) of the MOH, and the Ministry of Finance was directly involved in the project's monitoring. The project was implemented by the MOH's own technical directorates and technical staff at the central and local levels. The implementing agency was efficient in spending the project's resources; in particular, through the AF, 150% of the original financing amount was executed and disbursed with only eight months of extension from the original closing date. The Social Agreements were not only expanded to 66 municipalities, but became mandatory for all 153 municipalities in the country. Procurement and fiduciary arrangements were in compliance with the Bank's standards (see Section 11b).

A minor shortcoming was that the implementing agency was not able to contract a consultancy for the estimation and adjustment of capitation payments. This consultancy was supposed to build a methodology to update the per capita payment that would be later used by the MOH. The project continued to use the original capitation amount, updating values according to the Consumer Price Index (ICR, p. 69).

Implementing Agency Performance Rating
Satisfactory

Overall Borrower Performance Rating
Satisfactory

10. M&E Design, Implementation, & Utilization

a. M&E Design
The original results framework included 4 PDO indicators and 12 intermediate outcome indicators. Original key performance indicators and intermediate outcome indicators had complete baseline and target values where relevant, and the frequency, data sources, and responsibilities for data collection were clearly reported (e.g. MOH, SILAIS, independent firm). In general, the selected indicators were consistent with project's objectives.

The main shortcoming in M&E design was the lack of definition of outcome indicators for objective 3. (The

ICR added one indicator to measure this PDO after project closing.)

b. M&E Implementation

The results framework was adjusted twice to better align the indicators to the country's data systems and cover the expanded scope of the AF. After two years of project implementation, outcome indicators for objective 1 were replaced by indicators actually used to trigger capitation payments due to the need to align indicators with data from the National Statistical System. With the AF, new target values were set for the newly added municipalities, and in some cases targets were defined for AF municipalities' subgroups to account for heterogeneities in baseline values.

M&E activities were implemented by the MOH and the SILAIS, which kept records of progress on project indicators through regular visits to the project municipalities. Independent audits supervised M&E arrangements, verifying the achievement of targets and producing regular reports.

c. M&E Utilization

The ICR states that the project's results framework and its indicators were included as part of MOH and SILAIS strategic planning after project closing. These indicators were crucial to following up the municipal agreements with the MHNs, which are part of national health strategic planning (ICR, p.14). The fact that results framework indicators were linked with capitation payments helped in the identification of underperformance, prompting MHN authorities to fix these problems in order to receive the payments.

M&E Quality Rating

Substantial

11. Other Issues

a. Safeguards

The project triggered the Environmental Assessment (OP/BP 4.01) and Indigenous Peoples (OP/BP 4.10) safeguards. It was rated Environmental Assessment category B. An Environmental Management Framework and Indigenous Peoples Plan (IPP) were prepared in 2010 and later updated with the AF.

The environmental safeguard was triggered because the project supported minor rehabilitation works in national and municipal health facilities and improvements in health care waste management. Environmental activities included the development of the Environmental Management Framework for the implementation of environmental safeguards in health infrastructure projects in the stages of construction and operation; the training of 4,050 people from nine hospitals in management of hospital waste and the installation of equipment with environmentally friendly technology; development of guidelines for hospital waste management elaborated by a consulting firm; and the strengthening of the Environmental Management Unit

to support the implementation of management plans in six SILAIS hospitals.

The Indigenous Peoples safeguard was triggered because the project targeted as beneficiaries the population of the indigenous territory of Alto Wangki and Bokay. The activities of the Indigenous Peoples' Planning Framework included the development of guidelines to harmonize Western and indigenous traditional medicine; the implementation of a Strategy for Integration of Natural Medicine and Complementary Therapies; capacity building for a total of 1,803 health workers in natural medicine and traditional and complementary therapies; and the inauguration of the Institute for Alternative Therapy in Managua.

The ICR (p. 23) states that the project was in full compliance with environmental and social safeguards.

b. Fiduciary Compliance

Financial management: According to the ICR (p. 13), the MOH complied with all World Bank fiduciary requirements. The administration of the project had the necessary staff, and financial and audit reports were of appropriate quality, although sometimes submission was done with delay. In some cases, project expenditures within SILAIS lacked supporting documentation, but this issue was monitored and later rectified. Project administration was responsive in addressing internal control issues arising from supervision and audits.

Procurement: Procurement was conducted under full compliance with World Bank guidelines. The project procurement unit had qualified staff, which was continually coached by Bank staff and participated in annual procurement trainings. By the end of the project, the team had successfully accomplished 262 procurement processes, including 14 international public biddings for a total of US$10 million and 32 national public biddings for a total of US$4 million.

c. Unintended impacts (Positive or Negative)

The ICR mentions continuing education programs and staff training as unintended outcomes of the project, but these seem to be an example of implemented activities that were not originally planned.

d. Other

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12. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment

Outcome	Satisfactory	Satisfactory	---
Risk to Development Outcome	Negligible	Negligible	---
Bank Performance	Satisfactory	Moderately Satisfactory	Quality at Entry was Moderately Satisfactory, and Bank Supervision was Satisfactory. According to IEG/OPCS harmonized guidelines, overall Bank Performance is the lower of the two ratings, as moderate shortcomings were present.
Borrower Performance	Satisfactory	Satisfactory	---
Quality of ICR		Substantial	---

Note
When insufficient information is provided by the Bank for IEG to arrive at a clear rating, IEG will downgrade the relevant ratings as warranted beginning July 1, 2006.
The "Reason for Disagreement/Comments" column could cross-reference other sections of the ICR Review, as appropriate.

13. Lessons

The ICR (pp. 24-25) offers several lessons derived from the project's experience, including:

- The development of culturally sensitive interventions, aimed at ensuring utilization of health services by indigenous populations, requires involvement of both the community and health care professionals. A household survey on service satisfaction at the beginning of the project revealed that one of the main reasons for not using health services was the lack of cultural adaptation in service provision. The task team worked closely with community and health practitioners from indigenous backgrounds to develop materials and documents for training and education on reproductive health that were translated to the language Miskito.

This ICRR adds:

- Despite the overall positive experience with capitation payments linked to results, capitation payments cannot overcome all access and quality shortcomings in health service provision. In this case, the government has recognized that some municipalities underperformed due to difficult access in some communities (demand barrier), understaffed health units (health system capacities), and mismatch of population data provided by INIDE and the actual population (HMIS).

- Alignment of results framework indicators with results-based financing performance targets (associated with capitation payments) is an efficient way to monitor project progress towards objectives, as it uses already available information and does not require additional effort to collect new data. It simplifies M&E activities appropriately, as long as the performance targets are adequate measures of the project's objectives.

14. Assessment Recommended?

No

15. Comments on Quality of ICR

The ICR is clearly written and provides a candid description of the project's implementation and achievements. This ICRR differs from the ICR in dividing the project into two phases instead of three. The ICR's section on achievement of outcomes could have been organized by project objectives instead of by project phases, and the ICR could have added more narrative when describing achievements (i.e. using the actual indicators) instead of referring to particular indicators by number (i.e. KPI1, IO1). Also, the lessons learned could have been more closely derived from project implementation experience. Finally, there is a mismatch in the Risk to Development Outcome rating in the main text (i.e. Moderate) and the Rating Summary (i.e. Low to Negligible). The TTL later confirmed that the intended rating of the ICR is Moderate.

a. Quality of ICR Rating

Substantial