Report Number : ICRR0021992

1. Project Data

Country
Colombia

Practice Area(Lead)
Environment, Natural Resources & the Blue Economy

Programmatic DPL
Planned Operations: 0

Approved Operations: 0

Operation ID
P150475

Operation Name
Colombia DPL for Sustainable Development

L/C/TF Number(s)
IBRD-85380

Closing Date (Original)
31-Oct-2016

Total Financing (USD)
700,704,760.00

Bank Approval Date
30-Sep-2015

Closing Date (Actual)
31-Oct-2016

	IBRD/IDA (USD)	Co-financing (USD)
Original Commitment	700,000,000.00	0.00
Revised Commitment	700,000,000.00	0.00
Actual	700,704,760.00	0.00

Prepared by	Reviewed by	ICR Review Coordinator	Group
Ranga Rajan Krishnamani	Christopher David Nelson	Christopher David Nelson	IEGSD

Operation ID
P161642

Operation Name
Second Sust. Dev. and Green Growth DPL (P161642)

L/C/TF Number(s)	Closing Date (Original)	Total Financing (USD)
IBRD-85380,IBRD-88060	31-Dec-2018	500,000,000.00
Bank Approval Date	**Closing Date (Actual)**	
14-Dec-2017	31-Dec-2018	

	IBRD/IDA (USD)	Co-financing (USD)
Original Commitment	500,000,000.00	0.00
Revised Commitment	500,000,000.00	0.00
Actual	500,000,000.00	0.00

2. Program Objectives and Policy Areas

a. Objectives

The first Development Policy Loan (DPL 1) operation, approved on September 30, 2015, was prepared as the first of three single programmatic operations. The operations aimed at supporting the government's overarching green growth strategy, of advancing economic growth compatible with climate change considerations. The Loan Agreement does not explicitly state the Program Development Objectives (PDOs). The PDOs as stated in the First Program Document were;

- **Establish a set of policy and institutional measures for green growth in transport, energy, environmental health and disaster risk management.**
- **Improve environmental quality by reducing Particulate Matter 2.5 in the air; strengthening regulatory instruments for reducing water pollution; and increasing capacity for solid waste disposal and enhancing waste recycling.**

Colombia's pledge in July 2017 to abide by the Paris Agreement for reducing greenhouse gas emissions, and the accelerated formalization of the Colombian Peace Process for ending the conflict with the Colombian Revolutionary Forces (FARC) guerilla group, accorded opportunities for strengthening the DPL operations. Also, the proposed third DPL operation would have fallen in the early period of a new administration and exposed the operation to unnecessary risks. (ICR, page 12). Hence, the second and the third operations were merged in a single operation. By delaying the second operation, policy reforms from the third operation centering on green growth and environmental quality in key sectors and prior actions for peace building and promoting green growth in rural areas, were merged in a single final operation (as envisioned the original DPL operations focused only on urban areas). The PDOs as stated in the Second Program Document for the second and final operation in the series were:

1. To support a set of policy and institutional measures for green growth in transport, energy, environmental health and natural resources:
2. Improving environmental quality for reducing Particulate Matter 2.5 in the air, strengthening regulations for sanitation and increasing capacity to reuse and dispose solid waste.
The second operation broadly maintained the original areas, but made adjustments in view of the changing circumstances: (i) It replaced disaster risk management with management of natural resources, as the former activity was financed by parallel donors (discussed in section 2c): (ii) It shifted one focal area of "strengthening regulatory and economic instruments for reducing water pollution" with "strengthening regulations for water sanitation": (The area of strengthening economic instruments for water sanitation) was financed by parallel donors (discussed in section 2c): and (iii) It reformulated "solid waste disposal and enhanced waste recycling" to "reusing and disposing solid waste". Following this, five indicators were dropped and six added.
The PDOs of the final operation shared the same higher level objectives of enhancing growth with climate change considerations, and the areas of reform that will help the country move towards that goal. Given that the underlying focus on green growth and environmental sustainability in key sectors were preserved and new reforms were included in view of the changing circumstances , there will not be a split rating of objectives and efficacy will be assessed on the PDO for the final operation, which still combines an explicitly succinct objective statement.

b. Pillars/Policy Areas

The pillars and policy areas, which were the same as the PDOs stated above, are discussed in Section 3b.

c. Comments on Program Cost, Financing, and Dates

Project financing. The DPO was financed by an IBRD loan of US$1.2 billion (US$700 million for DPO 1 and US$500.0 for DPO 2). This amount was fully disbursed. There was parallel financing for budget support operations on: (i) disaster risk management activities from the German state-owned development Bank (kfW) and the Development Bank of Latin America (CAT): (ii) supporting economic instruments for wastewater management from the kfW: (iii) supporting climate adaptation activities from the French Agency for Development (AFD): and technical assistance support to Colombia's green growth mission from the Korean Green Growth Trust Fund.
As part of this operation, the Bank included in the Loan Agreement an option for the government to request a "Catastrophe Transaction" (CAT bond) to mitigate the effects of natural disasters. This option allowed Colombia to participate in a regional initiative of the "Pacific Alliance" (an alliance formed through a multilateral agreement among the governments of Colombia, Chile, Merico and Peru), that resulted in the largest sovereign risk insurance transaction at the time (US$1.36 billion, of which US$400 million was reserved for Colombia). Linking the CAT bond to this series allowed Colombia to join the initiative and thereby facilitate access to cost-efficient coverage for earthquake risk. No such event occurred and hence no payment was made to Colombia during the execution of this operation.
Dates. DPL1 approved on September 30, 2015, closed on October 31, 2016. DPO 2 approved on December 14, 2017, closed on December 31, 2018. As the gap between the approval of the first operation and the

second operation was more than 24 months, a waiver was approved by the Vice Presidency for Operations Policy and Country Services to prevent the series from lapsing.

3. Relevance of Objectives & Design

a. Relevance of Objectives

Country context. Colombia's economic performance, with 3.2 percent average real Gross Domestic Product (GDP) growth between 2002 and 2012, had contributed to significant poverty reduction (with the share of population classified as poor declining from 49% in 2003 to 27% in 2012) and shared prosperity (with income growth of the bottom 40% of the population reaching 6.6% as compared to 4.1% for the total population). Alongside these macroeconomic developments, the government proceeded with peace negotiations with the FARC guerilla group, reaching agreements on three out the five negotiation topics for ending the conflict (illegal drugs, rural development and political participation). In recognition of the macroeconomic achievements, Colombia was invited to start its accession process with the Organization for Economic Cooperation and Development (OECD) in 2013.
Economic growth before appraisal was however sustained by declining stock of natural capital. Natural capital represented a significant share of Colombia's total wealth (10% as compared to 73% of human capital and 18% for produced capital), and Colombia's stock of natural capital, was under threat due to factors, such as air and water pollution in urban areas, forest and land degradation in rural areas and growing vulnerability to climate change effects. The combined natural resource losses damages were estimated to represent 37% of GDP in 2007. Reducing the impact of pollution on human and man made capital and reducing resource depletion and environmental degradation was important for the government strategy.
Government strategy. The central theme of the National Development Plan for 2014-2018, approved through article 1 of Law Number 1753 in 2015, was "*green growth*". The plan articulated the need for integrating environmental considerations in key sectors (discussed in section 3b). The NDP was based on a multi-sectoral and interregional dialogue that was aligned with Colombia's accession to the OECD.
The government also signed the Green Growth Declaration (moving towards a growth trajectory that reduces pollution and emissions, uses natural capital sustainably and is resilient to natural disasters and climate change), as part of its OECD accession process. The National Planning Department (DNP) also launched in February 2017, a green growth mission, for preparing the analytical underpinnings of a green growth policy to 2030. The PDOs were reiterated by the National Development Plan for the 2018-2022 period.
Bank strategy. The objectives were well-aligned with the Bank strategy. The second strategic theme of the Country Partnership Strategy (CPS) for 2012 - 2016 highlighted the need for sustaining growth with enhanced climate change resilience considerations (CPS, page 17). The Bank's current Country Partnership Framework (CPF) for 2016-2021 highlighted the need for enhancing capacity for managing natural resources in targeted regions (CPF, page 19).
This operation was preceded by a Bank-financed three part sustainable development DPL series. This series sought to extend the Bank support to the government strategy and build on the long standing dialogue with the government. When this operation was prepared, Colombia had a two-year Flexible Credit

Line (FCL) arrangement with the International Monetary Fund (IMF) of US$11.35 billion, as a precaution for protection against external tail risks (risks associated with rare events).

Rating
High

b. Relevance of Design

Rating
High

4. Achievement of Objectives (Efficacy)

Objective 1
Objective

To support a set of policy and institutional measures for green growth in transport, energy, environmental health and natural resources:

Rationale
1. Green growth strategy.
Outcomes. As required for the Plaza Agreement, the government submitted to the United Nations Framework Convention on Climate Change (UNFCC), its Nationally Determined Contribution (NDC), and set targets for reducing greenhouse gas emissions for 2030. Following this, the government enacted a climate change law (Law number 1931 of 2018), establishing the inter-ministerial Committee on Climate Change, providing a mandate to create information systems required to implement the NDC and to design an emissions trading system to complement the carbon tax implemented in 2016. The achievement of the development objective in this area is rated satisfactory as the intended results were realized.
2. Transport. The number of passenger journeys through public transportation systems increased from 27% at the baseline in 2015 to 31.4% in 2018, short of the target of 33%. There were no reliable data on the number of passenger journeys through the non-motorized transport mode to assess results. The modal shift towards non-motorized transport mode did not occur, due to a combination of factors, including increased use of motorcycles and limited political will and capacity at the subnational level to implement disincentives for using motorized transport modes. Given the lack of credible evidence to date on journeys through the non-motorized transport mode, the achievement of the development objective in this policy area is rated as moderately unsatisfactory.

3. Energy. The Non-Conventional Energy Fund and Efficient Energy Management Fund (FENOGE) for funding projects non-conventional sources of energy was operationalized with funding 62.1 billion Colombian Pesos (COBs) in December 2018. This represented three times more than the target of 20 COBs. This indicator was output-oriented. The ICR (paragraph 46) provides further evidence of impacts. 14 projects with a total value of COP 14.5 billion are under implementation to date in rural areas, aimed at reducing energy consumption through energy efficiency measures. This was expected to result in savings of 6,800 tons carbon dioxide. As of May 2017, under the National Rural Electrification Plan (PNER), electricity from non-conventional energy sources was provided to 19,837 beneficiaries in rural areas not covered by the national interconnected system, exceeding the target of 8,433 beneficiaries by 135%. Given that the output-based indicator was achieved at 311%, in combination with the additional evidence for the outcome-based indicator on people benefitting from non-conventional energy in rural areas, the impact of the series in the energy sector is rated as satisfactory.

4. Environmental Health. The policy reforms in this area was expected to develop the web-based public information system - the Registry of Emissions and Transfer of Pollutants (RETC), for providing data on the source, nature, quantity and transfer of hazardous chemicals to the environment, that were in line with OECD recommendations. The output-based RETC was established as targeted. While it is possible that the system could have long term positive impacts, given that there was no evidence of actual impact on environmental health when the operation closed, the achievement of the development objective in this policy area was rated as moderately satisfactory.

5. Forest Management. The policy reforms in this area were expected to contribute to the: (i) the number of projects established under the Forest for Peace Program. 27 projects with involvement of environmental entities had been established by December 2018, exceeding the target of five. These projects benefitted 17,555 families and restored 7,405 hectares of forests: and (ii) Four early warning reports on forest cover were produced as compared to two at the baseline, as targeted. While the targets were realized, a more appropriate indicator for policy reforms would have been to access the impact of the series on the protection of forests as a natural resource, that is, measuring the rate of deforestation. This review concurs with the assertion made in the ICR that the longer-term outcome data assessing the direct impact of the series on deforestation were not achievable within the timeframe of the series and given that other targets were exceeded, the achievement of the development objective in this area was rated as satisfactory.

With achievement of the three policy areas in this pillar rated as satisfactory, one moderately satisfactory and one moderately unsatisfactory, overall impact of policy reforms in this pillar is rated as satisfactory.

Rating
Substantial

Objective 2
Objective

Improving environmental quality for reducing Particulate Matter 2.5 in the air, strengthening regulations for sanitation and increasing capacity to reuse and dispose solid waste.

Rationale

Air quality. The policy reforms in this area were expected to improve air quality, by reducing the mean annual concentration of Particulate Matter (PM) 2.5. The mean annual concentration of PM2.5 in seven prioritized (due to the high levels of pollution and population) monitoring stations in the cities of Medellin, Itagui, and Bogota fell on average by 24.4% as compared to the baseline, almost five times more than the target of five percent. The performance in this policy area is rated as highly satisfactory, given that the targets were exceeded by 488%.

Sanitation. The policy reforms in this area were expected to: (i) increase in the number of people with access to improved water resources in rural areas: and (ii) increase in the rate of treated wastewater for reuse in agricultural activities. Regarding the first indicator, by December 2018, 8,526,403 people had access to improved water sources in rural areas, as compared to 7,937,296 at the baseline in 2014, marginally exceeding the target by 0.1 percent. Regarding the second indicator, the policy reforms were expected to increase the rate of treated wastewater by 20% by 2018 relative to the 2015 baseline. This target was not realized, due to the delays in the upgrades required for the company's (Ecopetrol) infrastructure wastewater treatment to comply with national standards. Given the positive results regarding sanitation in rural areas and insufficient performance on the reuse of treated wastewater, the achievement of the development objective in this area is rated as moderately satisfactory.

Reuse/recycling of solid waste. The policy reforms were expected to: (i) increase in the number of municipalities disposing solid waste in compliance with the legal framework in sanitary landfills or contingency cells established as temporary disposal sites that are smaller and have less restrictions: and (ii) increase in the recycling rate. Regarding the first indicator, by December 2018, 914 municipalities (out of 1,102 municipalities) disposed their solid waste as mandated, as compared to 874 municipalities at the baseline in 2015. The realized figure represented 99,8% of the target of 916. Regarding the second indicator, the recycling rate increased by 27% (8.4%) to 2018 (10.7%), more than the originally targeted 18% increase from a 2014 baseline. Given that the outcomes were realized, the achievement of the development objective in this area is rated as satisfactory.

With achievement of one policy area in this pillar rated as highly satisfactory, one satisfactory and one moderately satisfactory, overall impact of policy reforms in this pillar is rated as satisfactory.

Rating

Substantial

5. Outcome

The relevance of the prior actions (design) and achievement of the objectives (efficacy) were rated as satisfactory. The prior actions were linked to the objectives, although the design would have benefitted by stronger prior actions in areas where compliance by subnational agencies is necessary for realizing the national-level objectives. The series achieved most of its results (except in the transport sector). Given these achievements, outcome is rated as satisfactory.

a. Outcome Rating

Satisfactory

6. Rationale for Risk to Development Outcome Rating

Institutional risks. Ongoing benefits from several national reforms supported by this operation (such as those pertaining to transport, sanitation and waste management sectors), depend on compliance by subnational agencies. There is risk that the national government's ability to build on the progress made so far could be undermined, due to the limited technical and administrative capacity at the subnational level.
Stakeholder ownership risk. Some reforms supported by this operation (such as on air pollution) depend on cooperation from citizens. The ICR (paragraph 91) notes that while awareness of negative effects air pollution has been increasing, further progress on these reforms could be compromised by lifestyle choices of citizens (such as opting for motorcycles or private vehicles over using public transportation).
Financial risk. Given that reforms aimed at supporting public transportation in cities or increasing access to water, sanitation and energy services in rural services, is contingent upon funding and availability of public resources, sustainability of reforms in these areas might require private sector participation.

a. Risk to Development Outcome Rating

---

7. Assessment of Bank Performance

a. Quality-at-Entry

Quality-at-Entry Rating

---

b. Quality of supervision

Quality of Supervision Rating

Overall Bank Performance Rating
Satisfactory

8. Assessment of Borrower Performance

a. Government Performance

Government Performance Rating
---

b. Implementing Agency Performance

Implementing Agency Performance Rating

Overall Borrower Performance Rating
---

9. M&E Design, Implementation, & Utilization

a. M&E Design
---

b. M&E Implementation
---

c. M&E Utilization

M&E Quality Rating
---

10. Other Issues

a. Environmental and Social Effects

---

b. Fiduciary Compliance

---

c. Unintended impacts (Positive or Negative)

---

d. Other

According to the ICR (paragraph 84), the DPL series had no significant unintended outcomes or impacts.

11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Satisfactory	Satisfactory	---
Bank Performance	Satisfactory	Satisfactory	---
Relevance of Results Indicators		Moderately 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.

12. Lessons

The ICR draws the following three lessons from the experience of implementing this operation, with some adaptation of language.

1. National reform efforts whose success depends to a considerable extent on subnational level structures need to account for the political, financial and technical risks at those levels. The activities associated with promoting non-motorized transport modes in this operation faced obstacles at the subnational level. The lesson from this operation is that, where compliance at the subnational level is required for realizing

the national objectives, they should not only be identified, but also mitigated through measures embedded in the design of an operation and supported by prior actions, if need be, aimed at ensuring the compliance of subnational agencies.
2. The design of a reform program should be informed by extensive analytical work. The sound analytical underpinnings, including work conducted by the Bank, allowed the team aided the team to design solid operations.
3. Broad reforms as those supported by the series should be anchored in a widely accepted framework. This operation was aligned with elements of Colombia's National Development Plan for 2014-2018, prepared with comprehensive stakeholder engagement. This ensured the government's commitment to formulating coherent policies and pursuing their achievement supported by this series.

13. Assessment Recommended?

No

14. Comments on Quality of ICR

The ICR is well-prepared and candidly discusses the issues during preparation. It provides a good rationale for the changes in the second operation, given the changing circumstances. The ICR provides a good analysis of the prior actions and the ratings are consistent with the analysis of prior actions.
While the ICR is well prepared, it could have been more concise. The main body of the text at 36 pages is more than double the recommended length of 15 pages.

a. Quality of ICR Rating
Substantial