

Report No.: 103063

PROJECT PERFORMANCE ASSESSMENT REPORT

INDONESIA

**INDONESIA CLIMATE CHANGE DEVELOPMENT POLICY LOAN
(IBRD- 71950)**

February 9, 2016

Currency Equivalents (annual averages)

Currency Unit = Rupiah (IDR)

2010	US\$ 1.00	IDR 9009.8
2011	US\$ 1.00	IDR 9067.8

Abbreviations and Acronyms

ADB	Asian Development Bank
AFD	Agence Francais de Development
AusAID	Australian Agency for International Development
BAPPENA	<i>Badan Perencanaan Pembangunan Nasional</i> (National Development Planning Agency)
BAU	Business as usual
BKMG	Meteorology Climatology and Geophysics Agency
CC	Climate Change
CCPL	Climate Change Program Loan
CEA	Country Environment Analysis
CFS	Climate Field School Programs
CGD	Centre for Global Development
CIF	Climate Investment Fund
CIFOR	Center for International Forestry Research
COF	Confirmation of Parties
CPS	Country Partnership Strategy
CTF	Clean Technology Fund
DDR	Disaster Risk Reduction
DFID	Department of International Development
DNPI	National Council on Climate Change
DPL	Development Policy Loan
ESMAP	Energy Sector Management Assistance Program
FCPF	Forest Carbon Partnership Facility
FIF	Forest Investment Fund
FIT	Feed-in- Traffic
FMU	Forest Management Unit
GHG	Green House Gas
GOI	Government of Indonesia
ICCCPL	Indonesia Climate Change Policy Loan
ICCSR	Indonesia Climate Change Sectoral Roadmap
ICCTF	National Climate Change Trust Fund
ICR	Implementation Completion Report
ICRAF	World Agroforestry Center
ICZM	Integrated Coastal Zone Management
IEG	Independent Evaluation Group
IFCA	Indonesia Forest Climate Alliance
INAGOOS	Indonesian Global Ocean Observing System
ISR	Implementation Status and Results Report
JICA	Japanese International Cooperation Agency (JICA)
LOI	Letter of Intent
LULUCF	Land use, Land use change and Forestry
M&E	Monitoring and Evaluation

MEMR	Ministry of Energy and Mineral Resources
MOA	Ministry of Agriculture
MOE	Ministry of Environment
MOF	Ministry of Finance
MOFR	Ministry of Forestry
MOHA	Ministry of Home Affairs
MOU	Memorandum of Understanding
MPW	Ministry of Public Works
NAMA	Nationally Appropriate Mitigation Action
NC4ND	National Center for NAMA development
PBB	Performance Based Budgeting
PD	Program Document
POLA	Water Resource Management Patterns and Plans
PPAR	Project Performance Assessment Report
REDD	Reduced Emissions from Deforestation and Degradation
RPJM	Mid Term Development Plan
SRI	System for Rice Intensification
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
WRI	World Resources Institute
WRM	Water Resource Management

Fiscal Year

Government: January 1 – December 31

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Principal Ratings

	ICR*	ICR Review*	PPAR
Outcome	Moderately Satisfactory	Moderately Unsatisfactory	Moderately Unsatisfactory
Risk to Development Outcome	Moderate	Moderate	Moderate
Bank Performance	Moderately Satisfactory	Moderately Satisfactory	Moderately Satisfactory
Borrower Performance	Moderately Satisfactory	Moderately Unsatisfactory	Moderately Unsatisfactory

* The Implementation Completion Report (ICR) is a self-evaluation by the responsible Bank department. The ICR Review is an intermediate IEG product that seeks to independently verify the findings of the ICR.

Key Staff Responsible

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About this Report

The Independent Evaluation Group assesses the programs and activities of the World Bank for two purposes: first, to ensure the integrity of the Bank's self-evaluation process and to verify that the Bank's work is producing the expected results, and second, to help develop improved directions, policies, and procedures through the dissemination of lessons drawn from experience. As part of this work, IEG annually assesses 20-25 percent of the Bank's lending operations through field work. In selecting operations for assessment, preference is given to those that are innovative, large, or complex; those that are relevant to upcoming studies or country evaluations; those for which Executive Directors or Bank management have requested assessments; and those that are likely to generate important lessons.

To prepare a Project Performance Assessment Report (PPAR), IEG staff examine project files and other documents, visit the borrowing country to discuss the operation with the government, and other in-country stakeholders, and interview Bank staff and other donor agency staff both at headquarters and in local offices as appropriate.

Each PPAR is subject to internal IEG peer review, Panel review, and management approval. Once cleared internally, the PPAR is commented on by the responsible Bank department. The PPAR is also sent to the borrower for review. IEG incorporates both Bank and borrower comments as appropriate, and the borrowers' comments are attached to the document that is sent to the Bank's Board of Executive Directors. After an assessment report has been sent to the Board, it is disclosed to the public.

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Outcome: The extent to which the operation's major relevant objectives were achieved, or are expected to be achieved, efficiently. The rating has three dimensions: relevance, efficacy, and efficiency. *Relevance* includes relevance of objectives and relevance of design. Relevance of objectives is the extent to which the project's objectives are consistent with the country's current development priorities and with current Bank country and sectoral assistance strategies and corporate goals (expressed in Poverty Reduction Strategy Papers, Country Assistance Strategies, Sector Strategy Papers, Operational Policies). Relevance of design is the extent to which the project's design is consistent with the stated objectives. *Efficacy* is the extent to which the project's objectives were achieved, or are expected to be achieved, taking into account their relative importance. *Efficiency* is the extent to which the project achieved, or is expected to achieve, a return higher than the opportunity cost of capital and benefits at least cost compared to alternatives. The efficiency dimension generally is not applied to development policy operations. *Possible ratings for Outcome:* Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

Risk to Development Outcome: The risk, at the time of evaluation, that development outcomes (or expected outcomes) will not be maintained (or realized). *Possible ratings for Risk to Development Outcome:* High, Significant, Moderate, Negligible to Low, Not Evaluable.

Bank Performance: The extent to which services provided by the Bank ensured quality at entry of the operation and supported effective implementation through appropriate supervision (including ensuring adequate transition arrangements for regular operation of supported activities after loan/credit closing, toward the achievement of development outcomes. The rating has two dimensions: quality at entry and quality of supervision. *Possible ratings for Bank Performance:* Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

Borrower Performance: The extent to which the borrower (including the government and implementing agency or agencies) ensured quality of preparation and implementation, and complied with covenants and agreements, toward the achievement of development outcomes. The rating has two dimensions: government performance and implementing agency(ies) performance. *Possible ratings for Borrower Performance:* Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

Preface

This is the Project Performance Assessment Report (PPAR) for the Indonesia Climate Change Development Policy Loan (CCDPL). This was initially expected to be the first loan, for US\$ 200 million, in a programmatic series of four CCDPLs, but it was the only one that was actually presented to the Board. It was approved on May 25, 2010 and closed on December 31, 2010. The loan was fully disbursed.

The report presents findings based on a review of the project's Implementation Completion and Results Report dated June 27, 2013, program documents, legal documents, and other relevant materials. An IEG mission to Indonesia in August 2015 held discussions with World Bank country office staff, government officials, other development agencies, civil society organizations, and other project stakeholders (see Annex C). These included climate change, forestry, energy, water resource management, natural disaster management, marine and coastal management, and environmental specialists. IEG met with senior past or present government officials in various key ministries, including Finance, Planning (BAPPENAS), Economic Coordination, Environment, and Forestry in Jakarta, as well as with senior scientists at two CGIAR centers, the Center for International Forestry Research (CIFOR) and the World Agroforestry Center (ICRAF) in Bogor. Prior to the mission, IEG met with two former Country Directors, two former senior Jakarta-based Bank environmental staff, including the Task Team Leader at the time the CCDPL was appraised and closed, and a former Executive Director of CIFOR.

This program was selected for a PPAR for a number of reasons. It represents one of the relatively few closed Development Policy Operations with climate change goals. It was designed as the Bank's first programmatic DPL series for this purpose, later followed by a similar set of operations for Vietnam, which was largely modeled upon it. Thus, the reasons for its failure to proceed after the first loan was disbursed, based on a set of prior actions taken before it was approved, merits additional scrutiny. The World Bank's Implementation Completion and Results report focused on documenting outputs and policy changes, with relatively little assessment of the outcomes of policy reforms or on attribution to the World Bank operation. The PPAR sought to update and expand the analysis in this regard. It is also designed as a case study for the forthcoming IEG Learning Product on Development Policy Operations with environmental, including climate change, goals.

The contributions of all stakeholders, including World Bank staff in Washington DC and Jakarta, are gratefully acknowledged. We are also grateful for support to the mission from Renata Simatupang in Indonesia.

Following standard IEG procedures, the draft PPAR was shared with relevant Government officials and agencies for their review and comment, but no comments were received.

Summary

Indonesia is the third largest emitter of greenhouse gases in the developing world after China and India. These emissions stem largely from deforestation, peatland conversion, and associated fires, together with electricity generated by coal-fired power plants and the consumption of fossil fuels in the energy and transport sectors, also associated with high fuel subsidies and rapid urbanization. Composed of over 13,000 islands, Indonesia is also one of the most vulnerable countries to the rising adverse impacts of global climate change, including extreme weather events – tropical storms and droughts – and sea level rise, particularly on account of the concentration of much of its population in lowland areas.

In recognition of this, the Government of Indonesia (GOI) hosted the 13th Conference of the Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC) in Bali in December 2007, at which time it presented its National Action Plan for Addressing Climate Change. In late 2009, the President pledged that the country would reduce its greenhouse gas (GHG) emissions by 26 percent by 2020. Even prior to that, it signed an agreement with the Government of Japan that resulted in a multi-year policy-based loan to support Indonesian efforts to deal with climate change, based on the National Action Plan. The French Government joined this initiative shortly thereafter, but even though the World Bank participated in some of the initial meetings and provided technical and analytical support for this program, it decided not to co-finance it during the first two years of its implementation. The main reasons for this were because the agreed policy matrix was considered to be too fragmented and insufficiently ambitious with respect to forest governance and energy demand management (i.e., subsidy reduction).

Once GOI agreed to incorporate more significant policy reforms in the areas of energy pricing (i.e., reduction of electricity subsidies) and forest governance, together with its pledge to substantially cut emissions, the Bank agreed to participate in the funding of the second phase of the ongoing climate change policy loan program together with the Japanese International Cooperation Agency (JICA) and the Agence Francais de Developpement (AFD) through an initial Development Policy Loan (DPL) of US\$ 200 million, approved on May 25, 2010. JICA and AFD had contributed US\$ 300 and US\$ 200 million, respectively in 2008, and each provided US\$ 300 million both in 2009 and 2010. This was expected to be the first of a four-loan programmatic series to support what the Bank denominated the Indonesia Climate Change (CC) DPL Program, whose objectives were to support GOI efforts to develop a low carbon, climate-resilient growth path. A number of prior actions were recognized in three main policy areas -- mitigation, adaptation and disaster preparedness, and cross-sectoral and institutional issues – and eleven subareas to justify approval and disbursement of the first loan. Four triggers and other “indicative” policy actions were agreed by the Government and the development partners for the second loan as well as tentative indicative actions for the third and fourth ones, expected to occur in 2011, 2012, and 2013, respectively.

For a variety of reasons, the CC DPL series did not extend past the initial loan (CC DPL-I), which was disbursed in September 2010 and closed three months later. According to Government officials interviewed by IEG, the program failed to go forward because of a

Presidential decision not to borrow for climate change, even though the resources transferred by the Bank and the Japanese and French Governments were for general budget support and were not used to support investments to address climate change *per se*. This decision was reportedly taken in response to a “consensus” at the UNFCCC that developing countries should only receive grant money, rather than loans, to address climate change, although, in practice it was also a reflection of several other factors.

These factors included: (i) the loss of critical program “champions” within the Indonesian Government when the Minister of Finance departed and other high level personnel changes occurred within the National Development Planning Agency, BAPPENAS, which was responsible for program coordination; (ii) the availability of budget support finance from alternative sources, including the Bank through other DPLs; and (iii) the near simultaneous offer by the Norwegian Government to provide up to US\$ 1 billion in grant funding for implementation of Indonesia’s incipient REDD (Reduction of Deforestation and Degradation) program, which was also being supported by the Climate Change DPL. In addition, GOI had failed to meet two of the four triggers previously agreed for the second loan, while achievement of a third one (i.e., issuance of a presidential regulation formalizing the 26 percent reduction in GHG emissions, which did not occur until late September 2011) had been substantially delayed.

Due to these elements, only one of the four anticipated CC DPLs was presented to the Board. The Japanese and French Governments also ceased their funding for the policy-based program after 2010, although the other development partners, especially JICA, continued to provide technical assistance grants to some of the line ministries responsible for implementing parts of the original program. While one of the triggers for the second loan was met in a timely way, two others were not met in the form originally envisaged in the Program Document, and the fourth was delayed, while the experience with other indicative actions for planned operations two, three, and four was mixed. Several of the expected results could not be assessed, because the needed baseline surveys were not carried out or the agency responsible for their monitoring discontinued collection of the required data, while others were only achieved in part. Some results indicators, moreover, only partly reflected the policy actions that were to be taken.

While performance in some policy subareas, such as those related to renewable energy, water resource management, and natural disaster risk management, was generally positive, this was less true in others, especially those concerned with peatland conservation, REDD (now REDD+, which includes conservation, sustainable forest management, and enhancement of forest carbon stocks in addition to the reduction of deforestation and forest degradation -- REDD), and forest governance. Nor was it possible to establish an inter-governmental fiscal transfer mechanism to provide incentives for local governments to take priority climate change actions, including the strengthening of forest management activities, which had been one of the triggers for the second loan. As a result, even though the objectives of the CC DPL were – and continue to be -- highly relevant and its design was substantially relevant, its efficacy with regard to both its low carbon and its climate resilience objectives was only modest, and, its overall outcome, rated Moderately Unsatisfactory.

More generally, available data suggest that Indonesia's GHG emissions have continued to rise in recent years, at least through 2012, due to persisting high rates of deforestation, peatland conversion, and fires, as well as growing fossil fuel-based energy consumption. Electricity subsidies were finally reduced somewhat as of late 2013 and geothermal energy investments increased in part with financial support from the World Bank and the Clean Technology Fund (CTF). However, the share of renewables in Indonesia's energy mix remains very low (around 3 percent) and is expanding very slowly, as coal and oil continue to strongly predominate. Forest and land use management also persist as major challenges, while REDD+ implementation has advanced very slowly and had very limited results on the ground to date. Despite these broader considerations, the risk to the program's actual development outcome is rated Moderate.

Bank performance in terms of quality at entry is rated Moderately Satisfactory as, despite its relevance, there were a number of shortcomings in program design and several of the triggers for the proposed second loan proved overly ambitious given the strong institutional and political economy constraints encountered by the program. The latter included the frequent tendency of subnational governments to fail to implement central government decisions when they went against local vested economic and political interests, such as those related to peatland use, palm oil concessions, and curbing fires and deforestation, together with strong public resistance to cutting energy subsidies. Quality of supervision, however, is rated Satisfactory, as the Bank, together with BAPPENAS and the other development partners, closely monitored and did everything it could to help the DPL series move forward in 2010-11, but appropriately did not relax the previously agreed unmet triggers for the second loan. On balance, however, Bank performance is rated Moderately Satisfactory.

Borrower performance is rated Moderately Unsatisfactory both at the Government and Implementing Agency levels. While Government commitment in the Ministry of Finance and BAPPENAS was initially strong, it declined significantly after the changes in top level personnel, while commitment in the various line ministries and agencies involved in DPL implementation was uneven from the start and remained so throughout the brief life of the second phase of the program. A joint evaluation by AFD and JICA, issued in June 2014, observed that even the additional technical assistance grants provided by these donors to some of the participating ministries proved to be an insufficient incentive for them to proactively implement some of their sector-specific policy obligations, while others were effectively impeded by uncooperative local governments, empowered by the country's recent decentralization. The JICA-AFD evaluation, however, did not specifically assess the World Bank's role.

The quality of Monitoring and Evaluation is rated Modest, as some indicators did not sufficiently demonstrate progress in the policy area they were related to, some indicators were not collected, and utilization was largely limited to project reporting.

Despite these frustrations, the Indonesia CC DPL experience provides a number of important lessons. Among them are:

- Both a strong "champion" and broad institutional commitment are needed for DPL policy actions to be effectively implemented; it is, thus, important to fully understand the

incentives involved for the various government entities that are to be engaged in DPL implementation. In this regard also it is essential to fully understand the potential political economy, as well as the institutional, constraints that can impede or delay policy implementation; this has implications for the up-front risk analysis and the DPL appraisal process more generally.

- This is especially important in DPLs with environmental, including climate change objectives, which are inherently cross or multi-sectoral in nature, and, therefore, tend to depend on a broader range of participating institutions, both at the national and subnational levels, than single sector or macroeconomic/fiscal DPLs.
- Programmatic DPLs can encounter many of the same development effectiveness obstacles, including varying and changing levels of government and/or implementing agency commitment and implementation delays, as investment loans.
- DPLs for climate change and other complex development challenges are more effective as part of a broader targeted multi-instrument Bank assistance strategy, including the use of investment loans and technical assistance, as a way of ensuring greater Borrower interest and ownership and establishing a longer-term relationship and policy dialogue.
- Even when a DPL is unsuccessful in terms of its own expected results, it may play a positive and strategically important role as part of an evolving longer-term Bank-Borrower partnership to help address an emerging complex development challenge such as climate change.

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1. Background and Context

1.1 Between 1990 and 2010, Indonesia experienced rapid output growth, rising incomes, and improved living standards. Inflation was under control and poverty levels fell, even though many people remained close to the poverty line. Indonesia was less affected by the global financial crisis of 2008-09 than many other developing nations, and economic growth was returning to pre-crisis levels by 2010 when the programmatic series of Climate Change Development Policy Loans (CC DPL) was approved. The economic outlook for the coming years was also good. The Government of Indonesia (GOI) nonetheless still needed budget support from the Bank and other development partners. Political and institutional reforms over the period were deemed generally successful, including greater decentralization of power to the provincial and local levels, although this also resulted in policy effectiveness constraints due to the ability of subnational governments to sometimes ignore or contradict central government mandates and regulations. However, the incumbent President won a new term in 2009, ensuring central government policy consistency and good relations with the Bank (which have continued under the new administration that took office in October 2014), including, for the most part, with respect to climate change, if not timely and consistent policy implementation on the ground, as will be discussed below.

1.2 Despite Indonesia's positive economic performance and increasing political consolidation, a 2009 World Bank Development Policy Review observed that the country needed to build on this foundation to ensure that economic growth would continue to accelerate while also becoming more inclusive and sustainable.¹ Poor environmental management was found to be a persisting shortcoming. In particular, stronger efforts were needed to improve forest management and governance and to reduce rural land, water, and coastal resource degradation, as well as to address urban pollution, flooding, congestion, and noise. There was also a need to enhance local government capacity for development planning, sustainable land and other natural resource management, and to address the rising impacts associated with climate change. These challenges were acknowledged in the country's comprehensive *State of the Environment Report* for 2012, whose Foreword by the then Minister of Environment affirmed that "much of Indonesia's environment is damaged and our natural resources are becoming increasingly depleted."²

1.3 Recognizing both Indonesia's growing contribution and increasing vulnerability to global climate change, the GOI established a National Action Plan for Addressing Climate

¹ World Bank, *Indonesia: Development Policy Review*, Jakarta, 2009.

² Ministry of Environment, *State of the Environment Report of Indonesia: Pillars of the Environment*, Jakarta, June 2013. Foreword.

Change in 2007³ and hosted the 13th Conference of the Parties (COP) for the United Nations Framework Convention for Climate Change (UNFCCC) in Bali in December of that year. The Bank played an instrumental role in helping the Government prepare for this highly visible conference, leading directly to its further engagement with GOI in relation to climate change, including its eventual decision to join the Japanese and French Governments in using development policy lending, among other forms of assistance, to support these efforts. More recently, a National Priority Action Plan issued by the incoming administration in 2010 confirmed climate change and environmental management among the Government's core development challenges. This was reiterated in the National Mid-Term Development Plan for 2010-2014, which established priorities in relation to energy -- including greater use of renewable sources -- the environment, and disaster risk management, the latter partly in response to the growing impacts of extreme weather events that were likely exacerbated by climate change.

1.4 With regard to Indonesia's rising greenhouse gas (GHG) emissions, as reiterated in its Second National Communication to the UNFCCC, issued in November 2010,⁴ rapid deforestation, illegal logging, and peat-land degradation were among the principal causes, together with rising fossil fuel (especially coal and oil) production and consumption, significant energy (both fuel and electricity) subsidies, increasing urbanization, and expansion of the national vehicle fleet (see the section on program relevance below for further details about the continuing importance of these sources). With respect to climate vulnerability, in turn, while Indonesia is expected to experience only modest temperature increases, there are likely to be significant alterations in wet and dry season precipitation, more intense rainfall, and a rise in the frequency and severity of extreme weather events, including both tropical storms and droughts. These phenomena are expected to harm both food security and water resource availability and to intensify the incidence of both water- and vector-borne diseases, while sea level rise will threaten coastal zones and local livelihoods and ocean warming will harm marine biodiversity.

1.5 In response to these effects, in addition to the 2007 National Action Plan for Addressing Climate Change mentioned above, in 2008, GOI established the National Council on Climate Change (DNPI), chaired by the President and composed of members from fifteen ministries, to coordinate climate policy. This was followed by creation of the National Climate Change Trust Fund (ICCTF) in 2009, several climate-related policy papers, and a low-carbon growth study, undertaken with the support of the World Bank's Energy Sector Management Assistance Program (ESMAP), which was also helping to carry out similar studies in other large GHG-emitting developing countries including Brazil and Mexico, at the time. In addition, BAPPENAS, the National Development Planning Agency, prepared a series of climate change sectoral "roadmaps," likewise in 2009, and the Ministry of Environment finalized the country's aforementioned Second National Communication to the UNFCCC in 2010, roughly a decade after the first such report was issued. With respect to GHG mitigation more specifically, the President committed Indonesia to a voluntary 26

³ See Ministry of Environment, *National Action Plan Addressing Climate Change*, Jakarta, and November 2007.

⁴ Ministry of Environment, *Second National Communication under the United Nations Framework Convention for Climate Change*, Jakarta, November 2010.

percent reduction of emissions below the projected business-as-usual (BAU) scenario by 2020 and a further reduction of up to 41 percent should sufficient international financial assistance be forthcoming. Made initially at the G-20 Summit in September 2009 and reiterated at the 15th UNFCCC COP in Copenhagen in December of that year, this pledge was later formalized by a Presidential Regulation in September 2011.⁵ Although delayed, this Regulation was also one of the four triggers for the proposed second CC DPL loan, which never went forward

1.6 In mid-2007, the Japanese and Indonesian Governments agreed on a bilateral framework to help the latter address climate change. In early 2008, Japan established a new financial mechanism to help developing nations mitigate and adapt to climate change. Indonesia became the first country to use resources from this fund to help implement the bilateral agreement in part through what was denominated the Climate Change Program Loan (CCPL). The first phase of this program (2007-2009) was based on a policy matrix agreed by the two Governments derived from the National Climate Change Action Plan. The Agence Francaise de Developpement (AFD) soon also joined this program and provided funding starting in 2008. While the Bank participated in early discussions on the program⁶ and provided background documents, analysis,⁷ and other technical inputs,⁸ it decided not to co-finance the CCPL during its initial phase.⁹ In addition to their policy-based funding, both the Japan International Cooperation Agency (JICA) and AFD extended parallel technical assistance grants to support GOI policy actions in the energy, forestry, and industrial sectors, as well as for program monitoring (especially by JICA) and supervision, about which more will also be said below.

Despite its 2008 decision not to provide financing, the Bank continued to participate with GOI (i.e., especially BAPPERNAS, the national planning agency, which was responsible for

⁵ See Republic of Indonesia, *National Action Plan for Reducing Greenhouse Gas Emissions (RAN-GRK)* and the associated Presidential Regulation No. 61 of 2011, September 2011.

⁶ The Bank identified climate change, together with disaster management, as an area for stepped-up engagement in its regional Environmental Strategy Note for Indonesia for 2008-2010, including the possibility of a stand-alone climate change DPL in partnership with Japan and the ADB (Asian Development Bank). It also issued a pre-concept note for a possible Bank CC DPL on February 15, 2008 with the objective (pg. 3) of supporting “GOI’s efforts to prepare for the post-2012 global climate change regime.”

⁷ The results of this analysis were reflected, *inter alia*, in an internal strategy paper for the forestry sector (see World Bank, *Sustaining Indonesia’s Forests: A Strategy for the World Bank*, Jakarta, June 2006) and collaboration with six other development partners to draft a report on assistance to the forest sector in Indonesia in 2006 (see World Bank, et. al. *Sustaining Economic Growth, Rural Livelihoods and Environmental Benefits: Strategic Options for Forest Assistance in Indonesia*, World Bank, Jakarta, December 2006).

⁸ See descriptions in World Bank, *Program Document for a Proposed Climate Change Development Policy Loan, April, 2010, (CC DP-I PD)* pp. 38, 96-97.

⁹ According to Bank staff, the decision not to co-finance the CCPL at that time was primarily because the policy matrix did not contain sufficient reform elements in the critical areas of forest governance and energy subsidies. When the financial crisis hit soon thereafter, the Government became more open to policy reforms in these areas and the Bank decided to provide financial, as well as technical, support, as indicated in a second pre-concept note issued in November 2009. The Bank also saw this as an opportunity to support an activity led by another donor (i.e., Japan).

its coordination), JICA, AFD and later also the Asian Development Bank (ADB), in monitoring CCPL implementation during its initial years as well as in the planning activities for its second phase, expected to start in 2010. According to the Program Document for CC DPL-I (PD), the Bank added value to this process “by sharpening the focus of the operation on a core set of key issues, elevating key policy issues to high level decision makers, and integrating assistance across a range of Bank lending and non-lending instruments, including climate finance.”¹⁰ The most important high level decision makers referred to in the PD were in the Ministry of Finance, including the then Minister herself, who was highly supportive of both the initiative and the Bank’s participation, and senior officials in BAPPENAS.

1.7 IEG has reviewed the original JICA-AFD policy matrix for the CCPL for 2010, which contained a much larger number of specific activities, but gave much less attention to broader (and more politically sensitive) policy concerns, such as energy pricing and subsidy reduction, of which there is no mention, and forest governance, which was referred to only in terms of “improved forest management,” than in the matrix eventually agreed for the CC DPL series with Bank financing.¹¹ The November 2009 pre-concept note for this operation highlighted some of the critical policy areas not included in the JICA-AFD matrix that this operation could help GOI address. The Bank reportedly also increased the operation’s focus on adaptation, although the original JICA-AFD matrix included a substantial set of policy actions in this regard, including for water resource management, agriculture, disaster risk management, and the marine and fisheries sector. Thus, the Bank’s incremental contribution in this regard is not clear and the main focus of the jointly financed CC DPL continued to be on mitigation, and especially on the main sources of GHG emissions, deforestation, peatland fires, and a fossil fuel-based energy sector, which were jointly responsible for more than three-fourths of the total in 2005, according to Indonesia’s Second National Communication to the UNFCCC.

1.8 Finally, in addition to the analytical work cited above, at the time CC DPL-I was approved the Bank was supporting the Government’s climate change agenda through various other interventions, to some of which the final agreed policy action matrix was specifically linked. These included, for example, development of a US\$ 500 million geothermal investment project using a Bank-administered US\$ 4 million GEF grant and preparation of a request for US\$ 400 million of concessional financing from the Clean Technology Fund (CTF). They also included proposed grant support through the Forest Carbon Partnership Facility (FCPF) and the Forest Investment Fund (FIP), coordination of donor assistance for the Indonesia Forest Climate Alliance (IFCA), which helped develop the Government’s REDD (Reducing Deforestation and Forest Degradation) Platform in 2007,¹² and a major technical assistance program for water management for climate change mitigation and

¹⁰ World Bank, CC DOL-I-PD, op.cit, para 128, pg 38. The Bank analytical pieces cited are a Country Environmental Analysis (CEA) entitled *Investing in a More Sustainable Indonesia* (World Bank

¹¹ See, World Bank, *Indonesia Policy Matrix for Climate Change Program Loan (GOJ-AFD Base)*, draft, Jakarta, November 25, 2009.

¹²World Bank, *PD, op. cit.*, paras. 136-139, pg. 40.

adaptive development in Indonesia’s lowlands, known as WACLIMAD.”¹³ Since that time, the Bank has provided considerable technical and operational support for Indonesia’s participation in the UN-initiated REDD – now REDD+¹⁴ -- program, including in connection with the CC DPL. In short, the CC DPL was only one of several Bank-assisted activities in relation to climate change mitigation, both on the energy and on the land use and forestry sides, and, to a lesser extent adaptation, prior, in parallel, and subsequent to the CC DPL operation.

2. Objectives, Design, and their Relevance

Objectives

2.1 There was no statement of program objectives in the Loan Agreement, dated June 23, 2010.¹⁵

2.2 According to the Program Document (PD), the objective of CC DPL-I – and implicitly of the entire anticipated four-loan Bank programmatic CC DPL series – was “to support the Government’s efforts to develop a lower carbon, more climate-resilient growth path.” Focusing on three areas – mitigation, adaptation and disaster preparedness, and institutional and cross-sectoral issues, the PD affirmed that the CC DPLs would help Indonesia prepare for the global climate change regime by establishing a favorable policy and institutional setting that could access climate finance opportunities and global markets and that its policy actions would benefit the country by providing incentives to improve governance, forest management, efficiency, competitiveness, and energy security. Finally, it noted that the Bank operation would be “consistent with and provide parallel financing for the Climate Change Policy Loan series, jointly financed by Japan and AFD” and that, by contributing to this process, the Bank would add value “by linking reform efforts to the full range of engagements and investment instruments,” described elsewhere in the PD.

2.3 The GOI’s Letter of Development Policy, dated April 26, 2010, addressed to the heads of JICA, AFD, and the Bank, and signed by the Ministers of Development Planning and Finance indicated that the Government intended to make the ICCTF operational. It also observed that this Fund, centered at BAPPENAS, would provide “a focal point for

¹³ This technical assistance project was implemented between March 2010 and February 2012 and focused on the coastal lowlands of Sumatra, Kalimantan, and Papua. See Government of Indonesia/World Bank, *Thematic Paper 10 – Water Management for Climate Change Mitigation and Adaptive Development in Lowlands*, Technical Assistance WACLIMAD Summary Report, Jakarta, February 2012, for an overview of the results of this work.

¹⁴ Initially, REDD was concerned only with reducing deforestation and forest degradation, but it was later expanded to include activities for conservation, sustainable forest management, and enhancement of forest carbon stocks.

¹⁵ World Bank, *Loan Agreement for the Indonesia Climate Change Development Policy Loan between the Republic of Indonesia and the International Bank for Reconstruction and Development*, June 23, 2010.

coordination and priority setting,” and that the Government would establish a GHG inventory as “an essential basis for planning, formulation and implementation of policies and monitoring of impacts as well as to design the national MRV [Monitoring, Reporting, and Verification] system,”¹⁶ although these actions were not part of the CC DPL per se.

2.4 In the absence of a statement of program objectives in the Legal Agreement, this project performance assessment report (PPAR) evaluates the CC DPL program against the objectives and expected results presented in the PD. It considers the performance of the expected programmatic DPL series as a whole, even though only one of the originally anticipated four operations was approved. Based in part on an evaluation mission undertaken in August 2015, this PPAR also provides an update of project performance and other information presented in the Implementation Completion and Results (ICR) Report, issued in June 2013, as well as in the desk-based ICR Review posted by IEG in March 2015.

Relevance of Objectives

2.5 The objectives of the CC DPL series – to support Indonesian Government efforts to develop a low-carbon, climate-resilient growth path -- were and remain very relevant. As concerns **mitigation** (i.e., low-carbon growth), the second phase of the CCPL program and the intended Bank CC DPL series focused on the three main sources of GHG emissions in Indonesia. According to the *Second National Communication to the UNFCCC*, land use, land use change and forestry (LULUCF) -- mainly deforestation -- was responsible for 37.7 percent of such emissions in 2005, the most recent year for which such official data were available, followed by peatland fires (25.2 percent), the energy sector (20.6 percent), waste (9.3 percent), agriculture (4.5 percent), and industrial processes (2.7 percent).¹⁷ Given existing industrialization and urbanization trends and persisting energy subsidies, it was deemed likely that the energy sector’s share of total emissions, including for vehicle use, would increase in the future

2.6 This scenario continues to be the case and policy reform and institutional and investment responses to it are even more urgently needed than in 2010, as the draft Bank engagement note on climate change in Indonesia, dated July 2015, makes clear. According to this source:

2.7 Indonesia represents a critical player in global efforts to mitigate climate change. Based on 2012 data, Indonesia is the sixth largest GHG emitter when land use, land use change and forestry (LULUCF) are counted. The vast majority of total emissions come from forestry and land use changes. The activities primarily responsible for these emissions are deforestation and peat degradation, most recently associated with the expansion of palm oil

¹⁶ Government of Indonesia, Letter of Development Policy, April 26, 2010, Annex 1 to the CC DPL-1 PD, pg.2

¹⁷ Ministry of Environment, *Second National Communication to UNFCCC*, *op. cit.* Executive Summary, pg. xi.

plantations. Most of these emissions stem from peat forest fires,¹⁸ which have important negative economic, health, and environmental impacts.¹⁹

2.8 As concerns the **energy sector**, the note observes that “Indonesia’s current development pathway is expected to lead to significantly increased fossil fuel emissions, particularly due to expanded power generation, rising manufacturing, and rapid urbanization.” This, in turn, is due primarily to the continuing predominance of coal and petroleum in the country’s energy matrix and its slow uptake of renewables, which still account for a relatively low share of the total despite efforts aimed at boosting them. Accordingly, “despite an increase in feed-in tariffs,²⁰ an update to the Geothermal Law to declassify geothermal energy as a mining activity, and pursuing public-private partnerships, geothermal uptake has been slow due to cost and risk of investment in the technology compared with power generation from fossil fuels.” It also states that Indonesia’s persisting fuel subsidies, which accounted for more than one-fifth of GOI’s budget in 2012, are a significant factor in impeding the competitiveness of renewable sources as well as an underlying factor behind the rapid growth in vehicle ownership and slow expansion of public transport options. The note concludes that “in addition to being a fiscal burden, the subsidy disincentivizes (sic) investment in renewable energy and inadvertently adds to GHG emissions.” On the mitigation side, therefore, the CC DPL’s proposed support for a low-carbon development path clearly remains very relevant both to the GOI’s and the Bank’s climate change-related priorities and agendas.

2.9 As concerns **adaptation**, Indonesia continues to be highly vulnerable to the impacts of both extreme weather events and sea level rise associated with climate change. The PD for CC DPL-1 affirmed that more than 41 million Indonesians lived within ten meters above the average sea level and that coastal cities including Jakarta, Semarang, and Surabaya were of particular concern because of their high population densities. It is estimated that annual GDP loss due to climate change in Indonesia could reach 2.5 percent by 2100 as a result of the country’s tropical climate, extensive coastlines, coastal population concentration, high dependence on agriculture and natural resources, and relatively low adaptive capacity. One recent index of climate change adaptation capacity ranks Indonesia 153rd out of 192 countries when adjusted for GDP, a rating similar to those for Panama, Afghanistan, and Iran.²¹

¹⁸ For more on the impact of recent peat forest fires, see World Bank, *Indonesia Economic Quarterly: Hard Choices*, July 2014, pp. 22-28. The smoke generated by peat fires have also strained relations with neighboring countries, particularly Malaysia and Singapore, which have complained to GOI about the resulting air pollution.

¹⁹ World Bank, *Draft Engagement Note: Climate Change and Indonesia*, Jakarta, July 2015, pp. 2-3. The GHG emissions data cited in this report come from the World Resources Institute (WRI). In addition, the Note observed that “beyond territorial emissions, Indonesia’s coastline and ocean territory act as major carbon sinks that are at risk of further exacerbating GHG emissions through their destruction (and are currently not included in national GHG accounting).”

²⁰ A “feed-in tariff” is a policy mechanism designed to accelerate investment in renewable energy. It achieves this by offering long-term contracts to renewable energy producers, typically based on the cost of generation of each technology. Rather than pay an equal amount for energy, users of technologies such as wind energy, are awarded a lower Kwh price.

²¹ See University Notre Dame Global Adaptation Index (ND-GAIN).

2.10 These concerns continue to be very salient, as the recent Bank draft engagement note stresses. Among other observations, it affirms that “Indonesia is susceptible to all major climate change risks except cyclones, [namely] drought, floods, landslides, and sea-level rise.” It likewise reiterates that the country’s largest population centers are characterized by “high exposure” to climate change impacts, both to inundation from flooding and salinization from sea level rise, affecting most of the population, and that failure to adapt to a changing climate most severely hurts the poor, including those dependent of forest and other natural resources for their livelihoods.²² Increasing the country’s resilience to the likely effects of climate change also continues to be a very relevant objective.

2.11 Finally, in relation to institutional and cross-sectoral issues, the GOI’s Letter of Development Policy acknowledged that climate change was one of the most difficult institutional areas for reform “given the centrality of policy choices and the breadth of institutions and sectors involved.” It also recognized that local governments play a critical role in adapting to and mitigating climate change and that the Government intended to “evaluate options and design fiscal transfers to provide incentives for local government to take priority climate actions.”²³ Adequate policy formulation, coordination, and implementation both across sectors within the central government and among the various levels of public administration are a persisting institutional challenge.

2.12 It can be concluded that the relevance of the objectives of the proposed CC DPL series was – and remains – high. These priorities were emphasized in key GOI documents including the 2007 *National Action Plan for Climate Change* and the 2008 *Development Response to Climate Change*, as well as in the *Second National Communication to the UNFCCC* and the *Medium-Term Development Plan (RPJM)* for 2010-2014. They were also reflected both in the Bank’s *Country Partnership Strategy (CPS)* for Indonesia for 2009-2012 and in the most recent one for Fiscal Years (FYs) 2013-2015. The most recent CPS, for example, affirms that climate change is “a key threat to Indonesia’s development, especially for the poor who are disproportionately affected.” One of the four overlapping “engagement areas” of this Strategy was labeled “pro-green” and subtitled “ensuring sustainable development and improving disaster resilience.” The CPS affirms, more specifically, that “deforestation, flooding, and other environmental concerns have highlighted the importance of adapting to and mitigating climate change and managing natural resources in a sustainable manner.”²⁴

2.13 The Bank’s commitment to support GOI efforts to strengthen its environmental management, including with respect to climate change, was likewise highlighted in the East Asia and Pacific Region’s Engagement Strategy for Indonesia with respect to the environment and climate change that was issued in 2012. With regard to climate change policy, this note emphasized the importance of “leveraging climate change as an entry point for environmentally-oriented policy reforms in the development planning process and moving

²² World Bank, *Draft Engagement Note: Climate Change and Indonesia*, *op. cit.* pp. 6-7.

²³ Government of Indonesia, *Letter of Development Policy*, *op. cit.*, pg. 2.

²⁴ World Bank, *FY 2013-2015 Country Partnership Strategy for Indonesia*, Jakarta, December 13, 2012, pp. 37-41.

toward green economy investments in the medium term.”²⁵ This has increasingly become occurred, building off the policy dialogue established in relation to the CC DPL.

2.14 GOI, through BAPPENAS, has recently requested Bank technical support to develop and implement a green growth strategy. The Bank has already generated a number of key outputs in this regard. A cross-sectoral “landscape” approach to environmental management incorporating climate change mitigation and adaptation measures is now also under development by the Bank and is expected to have an impact on several future lending operations. According to Bank staff interviewed by IEG, these and other new initiatives (on “blue carbon”²⁶ and the “blue economy,”²⁷ for example) have their origins in the policy dialogue with the Government established in association with the CC DPL. Based on these considerations the program’s objectives are rated **Highly Relevant**.

Design

Policy Areas

2.15 Program design is reflected in the prior policy actions recognized for CC DPL-1 (i.e., actions taken by the GOI before Board approval of this loan in May 2010) and the indicative ones tentatively proposed for CC DPLs-II (to be taken during 2010, for approval in 2011), III (2011-2012), and IV (2012-2013), as listed in the Program Document (PD) for the first of these operations. These prior actions were expected to lay the groundwork for future indicative ones, also identified in the PD, that would extend and deepen the reforms during the rest of the second phase of the CCPL and Bank CC DPL series.

2.16 There were three general policy areas – mitigation, adaptation and disaster preparedness, and cross-sectoral and institutional issues, each with a number of subareas, as indicated in Table 1. Prior actions for CC DPL 1 were recognized for all of these subareas as stated in the Loan Agreement and presented in Annex Tables 1-3. In some instances, however, the links between policy actions and the indicators selected in the Results Framework were tenuous and the extent to which observed results could be attributed to specific CC DPL policy actions is unclear.

²⁵ World Bank, *Environment and Climate Change: Investing in a More Sustainable Indonesia – EASIS Engagement Strategy Note 2012*, Jakarta, 2012, pp. 6-7.

²⁶ Blue carbon refers to the carbon captured by the world's oceans and coastal ecosystems. The carbon captured by living organisms in oceans is stored in the form of biomass and sediments from mangroves, salt marshes and seagrasses, which are particularly important in Indonesia.

²⁷ The Bank’s blue economy initiative in Indonesia consists of four pillars: (i) food security and livelihoods from sustainable capture fisheries and aquaculture; (ii) conservation of critical marine and coastal habitats and biodiversity; (iii) pollution reduction; and (iv) integrated blue resource management, including through integrated coastal zone management (ICZM), integrated management of the marine environment, and marine spatial planning. See World Bank, *Draft Engagement Note: Climate Change and Indonesia, op. cit.*, pp. 14-15.

Table 1: Policy Areas and Subareas in the Indonesia Climate Change DPL

<i>Mitigation</i>		<i>Adaptation and Disaster Preparedness</i>	<i>Cross-sectoral and Institutional</i>
Land Use Change and Deforestation	Energy	Water Resources Sector	Mainstreaming Climate Change in National Development Program
Peatland Conservation	Renewable Energy Development	Agriculture Sector	Policy Coordination and Financing for Climate Change
REDD (REDD+)	Energy Efficiency	Disaster Risk Management	
Forest Management and Governance	Energy Pricing	Marine and Fisheries Sector	

2.17 As part of program design, the PD for CC DPL-I also identified the indicative policy actions for CC DPLs II (to be implemented in 2010), III (2011), and IV (2012), as well as the expected results of the series for each of the various policy subareas. Four of the indicative policy actions for CC DPL-II, all of which are reproduced in Annex Tables 4-7, were considered to be particularly important by the Bank and, thus, were proposed as triggers for approval of the second loan in the series. These were: (i) in the subarea of peatland conservation: coordination among ministries to control peatland emissions, implemented under the framework of a presidential regulation; (ii) in the subarea of forest management and governance: design inter-governmental transfer mechanism to finance and improve the incentives for local governments to strengthen forest management activities toward emissions reductions; (iii) in the subarea of renewable energy development: issue draft regulation to clarify the scheme of compensation for the incremental cost of geothermal electricity to off-taker; and (iv) in the subarea of mainstreaming climate change in the national development program: issue a presidential decree on the National Action Plan for the voluntary 26 percent GHG emission reduction, referring directly to formalization of the President's declared commitment in late 2009.

2.18 These proposed triggers referred to potentially significant but, in some cases, very ambitious policy reforms. Thus, if achieved, they would indeed have constituted important steps forward. It is noteworthy that all of the proposed triggers for CC DPL II were concerned with mitigation and not a single one with adaptation, reflecting an imbalance in project design. More generally, however, aiming the DPL's policy actions at the principal land use and forestry sources of GHG emissions and on key mitigation measures in the energy sector and towards strengthening climate resilience in the water resource and disaster risk management, agriculture, and marine and fisheries sectors reflects a focus on the most pertinent, if also some of the most challenging, areas that needed to be addressed by the GOI in order to adequately deal with climate change.

Implementation Arrangements and Program Financing

2.19 Implementation of the Bank's CC DPL operations was expected to entail similar governance and monitoring arrangements as for the existing JICA-AFD-supported CCPL program. Overall coordination and monitoring would be the responsibility of BAPPENAS and the various policy actions were to be implemented by the pertinent line ministries or agencies. A Steering Committee composed of Director General or Deputy Director General level officials of the participating ministries would provide policy advice and liaise with the development partners regarding policy implementation. A Technical Committee consisting of less senior officials would meet on a more frequent basis to monitor schedules and work plans, and make recommendations to the Steering Committee. Implementation progress was to be reviewed on a quarterly basis by BAPPENAS, the other national institutions involved, and the development partners, including the Bank.²⁸

2.20 The Borrower was the Republic of Indonesia and the single tranche US\$ 200 million loan for CC DPL-1 was disbursed following the Bank's standard procedures for development policy operations. JICA and AFD provided US\$ 300 million each for the same purpose in 2010, based on the same set of prior policy actions recognized by the Bank. The Bank loan became effective on September 7, 2010, three weeks after the originally scheduled date, and closed, as planned, on December 30, 2010.

Monitoring and Evaluation Design

2.21 An annex in the PD presented a Results Framework (Monitoring and Evaluation Matrix), which identified targets for 2012 and the corresponding 2009 or 2010 baseline values for all but one (energy pricing)²⁹ of the policy subareas considered.³⁰ Annex Table 8 reproduces this information. This matrix indicated that program results were projected for achievement within a multi-year time frame, consistent with anticipated implementation of the expected four single tranche loans based on donor-recognized prior actions taken by GOI in the immediately preceding years. However, some of the indicators were not fully reflective of the policy objectives that they were intended to represent. For example, in the case of REDD, while the selected indicator does refer to the number of demonstration sites, this does not, in and of itself, necessarily reflect an improvement in the regulatory framework. Similarly, the number of forest crime cases brought to court does not necessarily demonstrate the existence of improved incentives for regional governments to address forest loss and degradation. In the cases of renewable energy and energy efficiency, in turn, an increase in capacity under construction in terms of the former and improved ratios for the latter may not

²⁸ World Bank, *CC DPL-I PD*, *op. cit.*, paras. 203-204, pg. 62.

²⁹ This was presumably because this policy subarea was also associated with another ongoing Bank programmatic DPL series, for infrastructure development.

³⁰ World Bank, *CC DPL-I PD*, *op. cit.*, Annex 3B, pp. 86-87. In some but not all cases, this annex also indicates the sources of the data on the results targets to be monitored (e.g., the World Wildlife Fund Forest Fire Monitoring Program in the case of peatland hotspots, the Ministry of Forestry in that of the REDD demonstration sites, and the Ministry of Energy and Mineral Resources in that of renewable energy capacity).

be just a consequence of improvements in the respective policy frameworks, but due to other factors (i.e., investments outside the DPL).

2.22 Similar examples could be given for other policy areas and their associated indicators. This inadequacy was acknowledged by the ICR, which observed that the Results Framework “could have been more closely linked to policy triggers,” as well as “more achievable in the time frame of the operation.”³¹ In addition, in the case of the indicator for the policy objective to scale up actions to improve climate resilience in agriculture, the proposed baseline survey regarding farmers’ understanding of adaptation techniques was not undertaken, and, thus, the proposed 20 percent increase target over the baseline could not be assessed. Furthermore, this, in and of itself, does not prove that actions to improve climate resilience in agriculture were in fact scaled up or that farmers were better prepared for climate change impacts, or that the program resulted in strengthened resilience to climate change impacts with respect to food production. There was a similar problem with the proposed indicator for the policy actions whose objective was to establish systems and strategies to improve climate preparedness and resilience in the coastal/marine sector – i.e., the percentage of coastal communities that showed greater awareness and changed practices relative to the baseline in targeted communities. Here too, the baseline value was never established.

2.23 Thus, there were a number of shortcomings with regard to the design of the Results and Monitoring Frameworks for CC PDL-I, which, unless they had been corrected in advance of the approval of the subsequent operations (which did not occur), would have applied to the CC DPL series as a whole. The ICR was very forthcoming with respect to these deficiencies, indicating that: “the matrix of actions was focused through dialogue to a fairly tight set of issues and performance indicators, at least for a complex and cross-cutting agenda...A more focused and effective monitoring system, developed, owned and implemented by the Government, may have been better able to monitor policy outcomes and performance indicators.”³²

2.24 Finally, as concerns program evaluation, beyond its reference to the aforementioned Annex, the Program Document only stated that the Bank would “work closely with BAPPENAS and other agencies and development partners gathered in the Steering Committee of the pre-existing program loans to monitor and assess reform progress and impacts during the life of the program” and that both monitoring and evaluation would be supported by “budgetary, legislative and economic data provided by the authorities and

³¹ World Bank, *Implementation Completion and Results Report (IBRD-7195-ID) on a Loan in the Amount of US\$ 200.0 Million to the Republic of Indonesia for the Climate Change Development Policy Loan*, June 27, 2013 (hereafter CC DPL ICR), pp. 8-9. The specific example given with respect to the timing issue is that “many actions might contribute indirectly to the GOI’s commitment to reduce GHG emissions by 26% by 2020, against business-as-usual projections, but these results may not be seen in 2012 or even 2015.”

³² *Ibid*, pg. 8. It also noted that “the CC DPL monitoring and evaluation framework was designed to provide feedback and adjust approaches on the overall climate policy reform agenda. The technical meetings and sectoral engagements produced a rich understanding of the issues and challenges in a range of high priority areas...But it also affirmed that “the CCDPL monitoring was used mainly in response to reporting needs related to the program loan, though the information could also have been used to assess when and how policies were being implemented properly with good results and where more intervention might be needed.”

verified in official disclosures and regulations.” It also affirmed that where baseline surveys were needed, the Bank would “work with partners to mobilize the necessary resources.”³³ However, these surveys were not carried out, and except for tracking the results indicators for which data were available and drafting the ICR, no other evaluation activities were undertaken by the Borrower or the Bank, although JICA and AFD did carry out an evaluation, published in June 2014.

Relevance of Design

2.25 The DPL series was intended to focus on the areas in which mitigation, adaptation, and mainstreaming efforts were most needed. In the case of **mitigation**, this included emissions associated with both land use -- including peat lands -- land use, land use change, and forestry (LULUCF), which together had accounted for nearly two-thirds of Indonesia’s total GHG emissions in 2005. While they were indeed relevant areas for action, it is unlikely that the policy measures proposed (focused on reducing illegal timber extraction and promoting REDD through pilot demonstration projects) could have had a significant impact in terms of curbing deforestation. In the energy sector, which was responsible for one-fifth of Indonesia’s emissions, in turn, the emphasis on renewable energy, especially geothermal investments, and energy efficiency was appropriate, but the program’s actions with respect to energy pricing, particularly the reform of electricity tariffs, were unclear.³⁴ Although included in the policy matrix, no monitoring or results indicators were presented for energy pricing.

2.26 As concerns **adaptation and disaster preparedness**, the objectives with respect to water resource management, agriculture, disaster risk, and the marine and coastal sectors were pertinent. The specific policy actions posed for water resource management and disaster risk reduction were significant, but the actions for both the agriculture and the marine and fisheries sectors seem to be less critical in terms of achieving the associated objectives, which were also quite general.

2.27 In the case of the **cross-sectoral and institutional issues**, supported policy actions while arguably of considerable importance, referred to actions either undertaken by the Government several years previously (publication of the National Action Plan Addressing Climate Change in 2007 and establishment of the National Council on Climate Change in 2008) or would have occurred independently of the CC DPL series due to Indonesia’s existing obligations in relation to the UNFCCC.

2.28 While the program design was of relevance insofar as it recognized and sought to support policy actions regarding the most important climate change-related challenges faced by Indonesia, several significant policy areas, especially for improved peatland and forest governance and management and adjusting energy prices, were politically sensitive and posed considerable risks in terms of implementation. The PD recognized this and indicated

³³ World Bank, *CC DPL-I*, op. cit., par. 205, pp. 62-63.

that progress could be either “intermittent” or “slow,”³⁵ as, in fact, would prove to be the case.

2.29 Furthermore, the Results and Monitoring Frameworks could have been better designed, both in terms of the specific cause and effect linkages between recognized prior and proposed indicative policy actions and expected outcomes and in relation to the nature and coverage of some of the monitoring indicators. In addition, it is unlikely that implementation of the ICCTF and design of an inter-governmental transfer system, important as these undoubtedly are, would be sufficient in and of themselves to fully meet the objective of strengthening policy coordination and developing financing mechanisms to address climate change (i.e., while the financial side of this objective may be well covered by these actions, the policy coordination aspect is not). Nor is it clear how the actions proposed in connection with the objective of strengthening the knowledge base and legal basis for climate change action and linking these to the national budgeting and planning process would actually lead to that result.

2.30 Based on the considerations above, relevance of the design of the CC DPL operation is rated **Substantial**.

3. Implementation

IMPLEMENTATION EXPERIENCE

3.1 As indicated in para 2.16 above and Annex Tables 4, 5 and 7, four triggers for approval of CC DPL-II were expected to be achieved during 2010-11, However, only two of these triggers were met and one of these occurred beyond the originally the anticipated time frame. The Presidential decree on a National Action Plan for a 26 percent voluntary GHG emissions reduction was signed on September 26, 2011, but this represented a delay from the original plan. The peat land conservation trigger required that coordination among ministries to control peat land emissions to be implemented under the framework of a presidential regulation, but while substantial progress has been made in dialogue and regulatory initiatives have been launched, inter-sectoral coordination and a stronger regulatory base has not yet been achieved.

3.2 According to Bank staff, as of early 2015 the presidential regulation still had not been issued and the partial measures taken by the Ministries of Public Works and Environment over the past few years to address this issue have been conflicting and ineffective. The two relevant ministries have not been able to come up with a single harmonized set of regulations.³⁶ In addition, when the Water Resource Law was retracted in 2014, the marshland regulations also became defunct, while opposition to the peatland regulations last

³⁵ World Bank, *CC DPL I PD*, *op. cit.*, paras. 216-217, pg. 64. Other key risks that were recognized in this document included: (i) coordination of GOI’s climate change national action plans; (ii) commitment to policy reform actions over the medium term; (iii) fiduciary and governance risks; and (iv) poverty and social impacts (i.e., the possibility that low income groups would not benefit from climate finance distribution mechanisms such as REDD+).

year resulted in postponement of its implementation. The project team subsequently argued that the Government issued Regulation 71 in 2014 which set out holistic and comprehensive measures to prevent damage to peat land areas, including planning to protect and use peat land and maintain peat land functions, and the Indonesian Parliament ratified the ASEAN Agreement on Transboundary Haze Pollution the same year.³⁷ However, this does not correspond specifically to the harmonization of ministries, especially the Ministries of Public Works and Environment, with respect to peatland management, implemented under the framework of a presidential regulation foreseen in the Program Document, the ASEAN Agreement was most likely a response to international pressure regarding the transboundary impact of smoke caused by the continued burning of peat land and other forest areas and not the DPL, and, in any case, these actions did not occur until 2014, over three years after the DPL had closed.³⁸

3.3 The trigger with regard to forest management and governance, in turn, was to design an inter-governmental transfer mechanism to improve the incentives for local governments to strengthen forest management with a view toward emissions reductions. However, while the Ministry of Forestry has made efforts effort to improve forest management and governance through establishment of Forest Management Units and that the Ministry of Home Affairs and MOFR had issued regulations, norms, procedures, and technical standards the intergovernmental transfer mechanism has not been established. In this regard, the project team has argued that a government transfer mechanism was established and budgeted to support Forest Management Units (FMUs) in 2011. However, it is not clear that this is the intergovernmental mechanism referred to in the Program Document, which was expected to be established by the Ministry of Finance in 2011 (through a legal instrument to be determined). It does not appear that the Ministry of Finance established this the transfer mechanism or carried out the “engagement of local governments in a fiscal benefit sharing framework with clear and consistent incentives” for them to strengthen forest management and reduce emissions. Emissions from forest burning in Indonesia have continued to rise since 2011 and it is unclear what positive impact the aforementioned FMUs have had in this regard, if any.

3.4 Finally, for the renewable energy trigger, the government has clarified the scheme of compensation for the incremental cost of geothermal electricity to off-takers. This included a Presidential Regulation in 2010, which established a higher level of compensation for

³⁷ According to the ASEAN website, the Governments of ten member countries signed this agreement in June 2002, which was the “first regional arrangement in the world that binds a group of contiguous states to tackle transboundary haze pollution resulting from land and forest fires.” However, though the Agreement entered into force in November 2003, Indonesia, which is the principal haze producing country in the region, was the last of the ten signatories to ratify it (in September 2014).

³⁸ The project team likewise emphasized to the establishment of the REDD+ agency in 2013 as well as the issuance of a Presidential Instruction regarding the establishment of a moratorium on new concessions for conversion of primary forests and peat lands in 2011, but neither of these activities refers to the above mentioned coordination between the Ministries of Public Works and Environment regarding peat land management. The REDD+ agency was initially set up outside of either of these ministries in a unit directly under the President’s office, but was subsequently demoted to a department within the reorganized Ministry of Environment and Forests in early 2015.

geothermal energy and a subsequent regulation that required the national electricity company, PLN, to purchase geothermal power.

3.5 In part because several triggers for the second loan were not met during the projected time frame, the Government and the Bank “mutually decided” to suspend the CC DPL series after the first loan. The other development partners followed suit, although this may have been driven primarily by the GOI’s decision to no longer borrow for climate change. Various factors, in fact, appear to have played a role in this decision. It was due in part to changes in senior management at the Ministry of Finance, soon after the first loan was approved, which led to “uncertainty in the appetite for development policy operations,” according to the ICR, together with changing responsibilities of key personnel at BAPPENAS, which “resulted in a shift in continuity of policy dialogue with key officials, if not the overall level of commitment to the aims of the CC DPL.”³⁹ According to Bank staff, a major factor in the Government’s decreasing commitment to the program was the change in Finance Ministers⁴⁰ and top officials in BAPPENAS in 2010. Bank staff confirmed that the loss of the program’s principal “champion” was a critical factor in the program’s inability to proceed beyond the first loan.

3.6 By early 2011, uncertainties were also expressed about the GOI’s need for continuing budget support through the CC DPL series, but this concern was in relation to its focus on climate change not on the use of DPLs *per se*. In November 2011, the Bank approved its Eighth Development Policy Loan for US\$ 400 million, in November 2012, it approved a US\$ 100 million DPL for Financial Sector and Investment Climate Reform and Modernization and a US\$ 100 million First Connectivity DPL, and in November 2013, the US\$ 400 million Second Institutional, Tax Administration, Social and Investment DPL and the US\$ 300 million Second Connectivity DPL. So DPLs *per se* continued to be a significant part of Bank lending for Indonesia after 2010, just not for climate change.

3.7 According to BAPPENAS, the reason for the Government’s decision not to proceed with the second CC DPL loan was that the President had announced in a Cabinet meeting that borrowing for climate change was no longer acceptable given a “consensus” at the UNFCCC that developing countries should only receive grants to help address climate change. This decision was made even though BAPPENAS reportedly explained that the resources transferred through the DPL were for general budget support and not for climate change investments *per se*. Some government officials argued that the aforementioned “consensus” came about when the Japanese Government attempted to present its funding for the CCPL as part of its national contribution to reduce GHG emissions and this claim was rejected by UNFCCC.

3.8 Another element that appears to have influenced the Government’s decision not to continue with the CC DPL series was the offer by the Norwegian Government to provide US\$ 1 billion in grants to support implementation of REDD+. This was confirmed in a joint Letter of Intent (LOI) between the two Governments that was signed at around the same time

³⁹ World Bank, CC DPL ICR, *op. cit.*, pg. 6.

⁴⁰ Some Bank staff argued that the incoming Finance Minister was unfamiliar with the use of DPLs and that this was a key factor in the decision not to continue with the series.

as the first Bank CC DPL was approved (i.e., May 2010). The prospect of obtaining “free money” from the Norwegian Government, on which there had been no prior consultation with the Bank or attempt to harmonize with the CC DPL policy matrix, thus reportedly became a “distraction” within the GOI and effectively helped to derail the CC DPL.⁴¹

3.9 In summary, several factors seem to have converged in the latter half of 2010 and early 2011 to halt the proposed four-year programmatic CC DPL series, several of which were unexpected at the time the first loan was appraised (April 2010) and occurred shortly after the loan was approved by the Board (May 2010) and the respective Loan Agreement signed (June 2010). These included the departure of the DPL series’ principal domestic “champion,” the above mentioned “UNFCCC consensus” that external assistance for climate change be grant-funded, and the US\$ 1 billion Norwegian grant funding offer, all of which appear to have contributed to the President’s decision to suspend borrowing for climate change. However, the GOI’s failure to meet two of the four pre-agreed triggers and its delay in meeting a third one for the second loan undoubtedly also played a role.

Implementation and Utilization of Monitoring and Evaluation (M&E)

3.10 The Program Document affirmed that, under the existing arrangements for the CCPL, which continued under CC DPL-I, progress on policy actions was monitored and reviewed quarterly by BAPPENAS, the implementing agencies, and the donors, with support from JICA. An AFD forestry expert also participated in the monitoring team, and, together with the JICA experts, worked with the development partners to provide technical assistance to the implementing ministries in key policy areas. Under these arrangements, the results of this monitoring process provided the basis for moving to the next year’s loans and informed negotiations between GOI and the development partners.

3.11 Monitoring was used mainly in response to reporting needs. However, the ICR stated that “the information could also have been used to assess when and how policies were being implemented properly with good results and where more intervention might be needed,”⁴² suggesting that the Bank was not fully satisfied with the way monitoring findings were utilized. In addition, baseline surveys were never carried out for two of the initial results indicators and one of the other expected monitoring information sources was later discontinued by the agency responsible for its collection, making it impossible to judge progress according to these initially proposed indicators.

3.12 The AFD/JICA joint evaluation gives considerable attention to the program’s monitoring activities. Among its observations were that program monitoring was facilitated by a close working relationship among BAPPENAS, JICA, AFD and that the monitoring team collected information from documents provided by the line ministries and interviews with Government officials in charge of specific policy actions. Based on the information collected, the monitoring team analyzed program achievements, obstacles, and challenges,

⁴¹ This LOI was reportedly negotiated directly between representatives of the Norwegian Government and the President’s office, and even the Finance Ministry was unaware of it until after it had become a *fait accompli*.

⁴² World Bank, *CC DPL-I ICR*, *op. cit.*, pg. 8.

reported the results to the Steering Committee, and made recommendations on measures to overcome the obstacles, and potential areas for cooperation.

3.13 However, certain shortcomings -- which also reflected problems with program implementation more generally -- were also reported. The joint evaluation concluded that, despite the accomplishments cited above, there was room to improve the monitoring process. According to this evaluation, “challenges were identified particularly at the initial stage of the program [as] regular monitoring activities and the technical committees could not gain sufficient commitment from the line ministries due to limited understanding among them of the objectives and the framework of the CCPL.” The monitoring team also reportedly faced difficulty in collecting the latest information. Furthermore, GOI ministries “could not share details on policies and regulations that were undergoing development.”⁴³

3.14 Program monitoring, in short, appears to have varied in its effectiveness and to have been of limited utility in terms of its contribution to ongoing program design, while *ex-post* assessment was limited to the ICR (2013) and the AFD/JICA joint evaluation (2014), which did not specifically consider the Bank’s inputs into this process. Other than reporting on the uneven progress with respect to individual policy actions, GOI engagement, and especially that of the line ministries involved in program activities, there was little use of monitoring information.

Environmental and Social Impacts

3.15 The Program Document suggests that the Bank went a good part of the way required by OP 8.60 in terms of identifying “likely significant impacts” of the policy actions recognized for CC DPL-I and anticipated for the subsequent loans in this series. However, it was not specific with regard to potential negative impacts associated with the actions taken -- or expected to be taken -- in the mitigation areas, including in the forestry/land use and energy sectors, or associated gaps in national and subnational capacity to address them. It did explicitly refer to the CEA and other analytical work undertaken by the Bank and other development partners and identified systemic weaknesses in terms of the enforcement of environmental legislation and inconsistent regulatory frameworks between the national and local levels, noting further in that “provinces and districts may issue regulations that contradict national legislation or regulations.” However, it fell short in terms of indicating how the Government, with or without the Bank’s support, intended to address some of these issues (e.g., inadequate enforcement of environmental legislation and inconsistency between national and subnational laws and regulations). This risk, moreover, was not specifically identified in the main text of the PD, although it did refer to “fiduciary and governance risks” more generally, specifically corruption and (unspecified) governance weaknesses that persisted as impediments to development.⁴⁴ A more detailed analysis of how potential environmental and social impacts were addressed in the PD is presented in Annex 2.

Financial Management

⁴³ ADF/JICA, *Joint Evaluation of ICCPL*, *op. cit.*, pg. 69.

⁴⁴ *Ibid*, para. 214, pg. 64.

3.16 No issues regarding financial management of the loan proceeds of CC DPL-I were reported, and the single tranche first loan, which became effective on September 7, 2010 – roughly three weeks later than initially anticipated -- closed as scheduled on December 31, 2010. As observed above, this was the first of an expected four DPL series, which, according to the loan program summary in the PD, were to involve similar amounts (i.e., US\$ 200 million, presumably in 2011, 2012, and 2013). However, as also noted above, the Government and the Bank suspended the series after the first loan was disbursed.

4. Achievement of the Objectives

4.1 This section assesses program efficacy in terms of the extent to which the dual objectives of the CC DPL series – i.e., provision of support to the Indonesian Government’s efforts to advance its climate change (i) mitigation (or move to a low-carbon growth path) and (ii) adaptation (or move to a more climate-resilient growth path) efforts -- were achieved. Both observed program outputs and outcomes are considered in relation to the indicative actions and expected results for each of the policy subareas briefly described in section 2. In numerous instances, however, desired outputs and outcomes have occurred beyond the timeframe of the Bank’s involvement (i.e., from 2009-2011) and/or insufficient information was presented in the ICR to permit a definitive judgment as to the achievement (or not) of desired program-related outcomes. In others, data to assess policy subarea results in relation to the results indicators proposed in the PD are unavailable either because the necessary baseline studies were not conducted or because the pertinent Borrower agency discontinued collection of the pertinent information.

4.2 Determining the Bank’s specific contribution is particularly complicated in the present case because the CCPL program was ongoing for two years with substantial financial and technical support from JICA and AFD before the Bank decided to provide additional financing for the first year of the program’s expected second phase (2010-2013). The respective funding support for this program, which totaled nearly US\$ 2 billion over the three year period, provided by the development partners is indicated in Table 2 below. The Bank’s contribution (10.5 percent of the total), even in 2010 (25 percent), was substantially less than that of the other two participating donors. Had the program continued beyond 2010, the Asian Development Bank (ADB) was reportedly also planning to contribute financial resources and technical assistance.

Table 2: Financial Support for Indonesia CCPL by Year (US\$ million)

<i>Year/Source</i>	<i>JICA</i>	<i>AFD</i>	<i>World Bank</i>	<i>Total</i>
2008	300	200	-	500
2009	300 ⁴⁵	300	-	600
2010	300	300	200	800
Total	900	800	200	1,900
Source: Joint JICA/AFD Evaluation				

⁴⁵ According to the AFD/JICA joint evaluation (*op. cit.*, Table 4, pg. 52), JICA also provided US\$ 100 million under a linked Emergency Loan.

4.3 Parallel technical assistance grants to some participating ministries were provided by JICA and AFD, some of which extended beyond the life of the CCPL. According to the ADF/JICA joint evaluation, BAPPENAS, in consultation with JICA and AFD, invited line ministries to submit requests for technical assistance related to climate change so as “to provide them with incentives.”⁴⁶ Thus, in addition to their support for program monitoring activities, this led to a large JICA technical assistance project (“Project of Capacity Development for Climate Change Strategies in Indonesia”), which reportedly further enhanced the relevance of the CCPL, as well as additional assistance from AFD, in response to demands from the line ministries. The types of bilateral TA provided together with the recipient ministries are listed in Annex 3. As a consequence of this support, determining what program results can be specifically attributed to the Bank’s inputs is even more difficult.

4.4 The above considerations notwithstanding, the Bank did contribute to this ongoing policy-based lending program in several ways. The Bank helped to bring greater attention to the program on the part of key GOI officials, especially in the Ministry of Finance (MOF), including the then Minister herself, and BAPPENAS. In short, the Bank had better access to these key central ministries, especially MOF, than the other participating development partners because of its historically strong (and reportedly very positive) engagement in the national macroeconomic and fiscal policy dialogue and through the use of past DPLs. According to the former Bank Country Director at the time the CC DPL operation was being prepared, the Minister of Finance was particularly interested in its fiscal implications insofar as it would help to make additional public revenues available at a time of global economic crisis through the potential reduction of burdensome energy subsidies.

4.5 The Bank also helped to simplify and rationalize the original JICA-AFD policy action matrix, as well as to give more policy substance to it. However, this proved to be a double-edged sword as it also made the matrix more risky and, in doing so, contributed to its being harder to implement given the political economy and institutional constraints that will be discussed further below. It also meant that the possibility of achieving some of the more politically sensitive policy actions was very much dependent on the DPL series having a strong “champion” within the central government, which it subsequently lost when that Minister departed. It also required firm buy-in from the ministries and agencies charged with program coordination and implementation. Commitment by the former later diminished and that by the latter was never really secured, according to the JICA/AFD joint evaluation and government officials interviewed by IEG. Actual accomplishments over the past half-decade in relation to the CC DPLs two main objectives and each of its specific indicative policy actions are considered below.

⁴⁶ The joint evaluation (*Ibid*, pg. 52) also stated that “TA was not really aligned with the financial part of the CCPL. The ICCPL disbursements were annual and the TA was multi-year... This non-alignment is puzzling, because it could be seen as a sign that the Donors are likely to disburse in any case, just to ‘justify’ the permanence of the TA.”

Objective 1: Support Government Efforts to Develop a Low-Carbon Growth Path

Outputs

4.6 This objective was to be supported by all policy subareas of both the mitigation and the cross-sectoral and institutional agendas. Specific outputs and outcomes associated with each subarea, including in relation to the triggers for the initially proposed second loan (see Annex Tables 4, 5 and 7 and the section on Implementation above), are briefly described in the ICR, for the most part with reference to the respective monitoring indicators contained in the Results Framework. Additional and updated information in this regard was obtained during IEG's August 2015 evaluation mission.

4.7 With respect to the first subarea under the **land use, land use change and forestry (LULUCF) mitigation** agenda, GOI's issuance and initial implementation of a master plan for **peatland rehabilitation** in Central Kalimantan was "an opportunity to enhance policies for conserving peat from drainage, conversion and fire." The Government, however, did not meet the proposed trigger for CC DPL-II to coordinate ministries to control peatland emissions under the framework of presidential regulation, and there is a persisting need to harmonize regulations for peatland management between the Ministry of Environment and the Ministry of Public Works. Neither Bank staff confirmed that neither issuance of the presidential regulation, nor achievement of key steps in a multi-sector policy dialogue toward establishing a legal framework for the National Strategy for lowlands, have yet occurred due largely to failure of the two aforementioned ministries to reach agreement.

4.8 As concerns the second LULUCF subarea, **Reduced Emissions from Deforestation and Degradation (REDD+)**, more than thirty demonstration sites or activities were operating in Indonesia in 2010, greatly exceeding the program's target for that year (8 sites), while plans for a REDD+ Agency and financing mechanism were in an "interdepartmental review process" and anticipated to lead to presidential approval. However, it also acknowledged that "this is a complex agenda and further progress, and possibly some setbacks, can be expected."⁴⁷ But the ICR did not indicate whether a Ministerial Decree on the REDD+ Mechanism and Procedures to define the roles and responsibilities of government agencies, local communities, and the private sector in managing carbon assets, which was an indicative action for 2010, had been completed. Nor did it state if establishment of a national carbon registry to track implementation of REDD+ activities and payments, an indicative action for 2011, or the assessment and development of a framework of forest fiscal management, including incentives for regional stakeholders, the one for 2012, had occurred.

4.9 The REDD+ agency, which, once finally established in the second half of 2014 and was directly linked to the President's office, has now been disbanded by the new administration that took office in October 2014 and placed within the new Ministry of Environment and Forestry, itself only established in January 2015, under the General

⁴⁷ World Bank, *CC DPL I ICR*, *op. cit.*, pg. 12.

Directorate for Climate Change. In addition, according to Bank staff, even though some REDD+ regulations have been issued over the past few years, neither the proposed national registry to track implementation of REDD+ activities and payments nor a forest fiscal management framework, including incentives for regional stakeholders, have yet been established. In short, except for the pilot demonstration sites, REDD+ activities have progressed more slowly than anticipated, and this has also affected implementation of the LOI between GOI and the Norwegian Governments with respect to REDD+.

4.10 The third LULUCF subarea was **forest governance and management**, which also featured an unmet trigger for CC DPL-II: to design an inter-governmental transfer mechanism to finance and improve the incentives for local governments to strengthen forest management activities. There appears to have been greater success with respect to the other indicative action in this area for 2010, to implement and monitor performance of MOFR's regulation (No. 38/2009) on timber legality, although this has also taken longer than initially anticipated. It was not possible to confirm achievement of the expected result for this policy area (i.e., the number of forest crime cases brought to court), however, because the necessary data source was discontinued by MOFR after 2009. MOFR decrees 38/2009 and 68/2011 (although it is not clear what the provisions of the latter were), as well as the FLEGT-VPA [which refers to the Forest Law Enforcement, Governance, and Trade Facility and Voluntary Partnership Agreement] and a December 2012 MOU, represented "positive steps toward stronger policy coordination and institutional strengthening for timber legality, monitoring, and forest sector enforcement."⁴⁸

4.11 FLEGT's objective is to reduce illegal logging by strengthening sustainable and legal forest management, improving governance, and promoting trade in legally produced timber, for which an action plan was established by the European Union in 2003. Indonesia was one of the first countries to negotiate such a Voluntary Agreement with the EU. Its VPA activities are described on the FLEGT website as "developing the systems needed to control, verify, and license illegal timber," which would be used for "all commercial timber and timber products produced, processed, and purchased in Indonesia," including exports to the EU. Negotiations for this VPA started in March 2007. It was agreed in May 2011, but only signed in September 2013, ratified in April 2014, and entered into force a month later.⁴⁹ The December 2012 Memorandum of Understanding (MOU) between the Ministries of Forestry and Environment, the Attorney General's Office, the National Police, and other agencies was intended to coordinate efforts toward law enforcement related to crimes in the forest and peatland sectors.

4.12 Earlier progress with respect to the curbing of illegal timber extraction was mentioned in the ICR, which affirmed that GOI had issued decrees for assessing the capacity for oversight, certification, and monitoring in the National Standards Agency and "after pilot testing with 11 firms, the timber legality system was implemented through 115 timber industries, 4 natural forest concessionaires, and 1 industrial timber plantation up to June 2011." It likewise mentioned efforts to establish "improved rules" for Forest Management

⁴⁸ World Bank, *CC DPL-I ICR*, *op. cit.*, pg. iv.

⁴⁹ See EUFLEGT Facility website on FLEGT-VPA in Indonesia.

Units (FMUs).⁵⁰ Thus, there appear to have been some advances with respect to forest governance and management, if considerably slower than expected, in relation to this very complicated issue even though the proposed trigger for CC DPL-II was not met and FMUs as such were not specifically mentioned either in the policy matrix or the Results Framework for CC DPL-I.

4.13 Turning to **energy sector mitigation** and starting with **renewable energy development**, in 2010, MEMR and BAPPENAS finished studies toward a policy framework for geothermal development, which included a risk mitigation mechanism and tender improvements. The Government also established a 1.16 trillion Rupiah fund for upstream exploration drilling, thereby meeting one of the indicative policy actions proposed for 2011 (i.e., continue to improve the policy framework to promote geothermal development and provide an exploration fund to mitigate upstream risk for eastern Indonesia). Subsequent MOF decrees had created a Geothermal Fund and appointed the Centre for Government Investment to manage it. The trigger for CC DPL II regarding a draft regulation to clarify compensation for the incremental cost of geothermal energy to off-takers was also met, as was the indicative action to improve the policy framework for promoting geothermal development to facilitate arrangements and deals between developers and off-takers. As a result, six new Power Purchase Agreements (PPAs) between PLN and independent producers for 435 Megawatts of geothermal power were signed by March 2011 and four others by October 2012.⁵¹ In terms of the associated results indicator, installed geothermal power capacity expanded from 1,065 to 1,226 MW, or by 15 percent, over the 2009 baseline by December 31, 2011, while there were also non-quantified increases in hydro, mini-hydro, biomass, solar, and wind capacity, although the baseline figures for these sources were not presented.

4.14 This approach was reportedly also gradually expanded to other renewable sources. Regulations in 2010 and 2011 allegedly “provided incentives for renewable energy development and implemented value added taxes for fuel subsidies” while “feed-in tariff rules for solar and wind were completed in 2012.” Even though progress was made in this regard, the ICR did not indicate whether the other indicative actions – review the impact of Ministerial Regulation No. 31/2009 and propose a new or revised regulation to promote renewable energy further and more effectively (2011) and draft and issue a regulation on improved framework for renewable energy (2012) – were met. Bank staff informed IEG, however, that Ministerial Regulation 31/2009 was officially replaced by Ministerial Regulation 4/2014 on January 31, 2014, which covered electricity produced by sanitary landfills, biomass, and biogas. But here too there was a significant delay in issuing this regulation in relation to the date originally anticipated, and it is not clear whether this improved the framework for renewable energy development more generally as had originally been hoped. This notwithstanding, progress seems to have been made in this area.

⁵⁰ World Bank, CC DPL-I ICR, op. cit., pp. 12-13. FMUs are work units of local governments that can perform site-level forest management and medium-to-long term planning depending on the designated conservation, protection, and social functions of the forest.

⁵¹ World Bank, CC DPL-I ICR, op. cit, pg. 13.

4.15 Furthermore, both the Bank and, with the Bank's assistance, the Clean Technology Fund (CTF) have continued to support renewable energy production in Indonesia through a combined US\$ 300 million in loans for the Geothermal Clean Energy Project, approved in July 2011. This project was expected to partially finance development of power plants of some 110 MW and 40 MW at the Ulubelu and Lahendong geothermal fields in Java, respectively, together with construction of an above-ground steam field system.⁵² Although its implementation has been delayed and its original closing date extended by four years for technical and operational reasons, this has been one of the more successful policy subareas of the CC DPL operation.

4.16 As concerns **energy efficiency**, results to date appear to have been somewhat less positive, as again it is not clear if the specific indicative actions for 2010 (i.e., prepare a master plan for energy conservation, including energy efficiency standards, energy audit program, with a M&E framework, fiscal incentives options, and industry energy conservation) and 2011 (implement this plan) were fully met as originally intended. According to Bank staff, the draft of this master plan, as mandated by Government Regulation No. 70/2009 and known as RIKEN, was never formally approved, although several sectoral regulations such as electricity saving, fuel saving, building the capacity of energy managers, and regulating the National Plan for Greenhouse Gas Emissions Reduction (RAN-GRK) were partially the result of this exercise. Progress was nonetheless reported with respect to energy efficiency in the industrial sector and the associated results indicator -- energy efficiency improved by 5 percent in at least one key sector -- was exceeded in the steel industry, where there was a 7 percent efficiency gain between April 2010 and December 2011.⁵³

4.17 With regard to **energy pricing**, finally, the ICR was silent, and it is not known whether the indicative action for 2011 (implement actions based on the road map, including regulations) was, in fact, achieved. The 2014 AFD/JICA evaluation, however, noted that the policy action in this area aimed at attaining the outcome target: "Energy consumption is better controlled by a more cost-oriented pricing mechanism, contributing to reducing both GHG emissions and energy subsidies." Progress for the outcome target reported by this assessment included: (i) completion of the roadmap for energy subsidies in 2010, the proposed indicative action in the policy matrix for that year; and (ii) reduction of electricity subsidies in the 2012 State Budget by 20 trillion Rupiahs compared with that for 2011.

4.18 According to a presentation by the Ministry of Energy and Mineral Resources (MEMR) in late 2013,⁵⁴ total energy subsidies, both for electricity and fuels, expanded significantly between 2007 and 2012, and were expected to fall only slightly in 2013. In fact, as Table 3 shows, they increased very substantially between 2010 and 2012 after having

⁵² For details, see World Bank, Project Appraisal Document on a Proposed Loan of US\$ 175 Million and a Proposed Loan for the Clean Technology Fund of US\$ 125 Million to the Republic of Indonesia for a Geothermal Clean Energy Project, op. cit. Total project cost was estimated at appraisal at just under US\$ 575 million (Table 2, pg. 8).

⁵³ World Bank, CC DPL-I ICR, op. cit., pp. iv-v..

⁵⁴ This presentation entitled *Policies and Programs on Energy Efficiency and Conservation in Indonesia* was presented by the Energy Conservation Group of MEMR at a meeting in Tokyo in September-October 2013.

dropped dramatically in 2009, with the US dollar equivalent of the total energy subsidies in 2012 being approximately US\$ 32 billion. The reasons for these changes are not clear but may have been largely a reflection of the global economic slowdown in 2008-2009 and Indonesia's recovery by 2011. Thus, it is evident that policy actions with respect to energy pricing were not taken during the period when the CC DPL was operational.

Table 3: Indonesian Energy Subsidies (in Trillion Rupiah), 2007-2013

<i>Subsidy</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013*</i>
Electricity Subsidy	37.48	78.58	53.72	58.10	93.18	100.2	99.9
Fuel and LPG Subsidy	83.94	142.87	52.82	82.35	168.17	211.9	209.9
Total Energy Subsidy	121.42	221.45	106.54	140.45	261.35	312.11	309.8
*2013 National Budget Planning Revised Source: Ministry of Energy and Mineral Resources							

4.19 ‘The two policy subareas for **cross sectoral and institutional issues** were also intended to contribute to the mitigation objective. This was particularly the case for the **mainstreaming climate change in the National Development Program** subareas, which included the 2010 trigger for CC DPL-II involving issuance of the presidential decree on the National Action Plan (RAN-GRK) for voluntary 26 percent GHG emissions reduction. This, in fact, did occur, but not until September 2011. In addition to formalizing the President’s earlier commitment, this Plan reportedly “specified the necessary actions of line ministries and regional governments.”⁵⁵ The ICR did not report on progress with respect to the indicative actions for 2011 – draft provincial action plans for contributing to the 26 percent emission reduction objective and prepare a NAMA (Nationally Appropriate Mitigation Action) in accordance with the midterm development plan (RPJM) – and 2012 --incorporate climate change program into midterm development plans at the Kabupaten level. However, Bank staff confirmed that provincial actions plans for contributing to the 26 percent emissions reduction target were drafted in 2012 and 2013 and that climate change programs are now being gradually incorporated into mid-term development plans at the Kabupaten level as they come up for revision. The status of NAMA preparation could not be determined. A NAMA framework study was nonetheless completed by BAPPENAS with the assistance of the German and French Governments,⁵⁶ and a document entitled *Indonesia’s Framework for Nationally Appropriate Mitigation Actions* was published in late 2013.⁵⁷

4.20 The other policy subarea, **Policy Coordination and Financing Scheme for Climate Change**, is of relevance both to the mitigation and adaptation (i.e., Government efforts to develop a climate-resilient growth path) objectives, so the observations below refer to both of these priorities. In terms of the **financing** of climate change projects through the ICCTF, this

⁵⁵World Bank, *CC DPL-I ICR*, *op. cit.*, pg. 16.

⁵⁶ See BAPPENAS, GIZ, and AFD, *Development of the Indonesian NAMAs Framework: Background Study*, Jakarta, no date. Together with JICA, these institutional partners established the National Center for NAMA development (NC4ND) as a supporting body for NAMA development in Indonesia.

⁵⁷ BAPPENAS, *Indonesia’s Framework for Nationally Appropriate Mitigation Actions*, Jakarta, November 2013.

mechanism became operational in September 2010, and the Government subsequently funded US\$ 4 million in projects submitted by the Ministries of Agriculture and Industry and the national Meteorological Agency, thereby meeting the indicative action for 2011 (i.e., continue to implement and support climate change projects under the ICTTF). The results indicator for this policy subarea – increased GOI actions related to the 26 percent emissions reduction plan – was also reportedly achieved, as the national budget allocated 15.9 trillion Rupiah for mitigation actions contained in the National Action Plan for GHG Emission Reductions in 2012, which was nearly a 60 percent increase over the 10 trillion Rupiah target value for April 2011, and compares very favorably with the 1.7 trillion Rupiah baseline allocation for climate change in 2009.

4.21 The operating procedures and trustee arrangements were formalized, in line with the applicable Presidential Regulations and the Government had received pledges of several billion dollars of climate assistance over a five year period (including US\$ 400 million from the CTF and a billion dollars from Norway contingent upon actions described in the next paragraph), together with hundreds of millions in bilateral programs, which has reportedly “contributed to awareness and capacity to access international climate finance.”⁵⁸ According to the ICCTF website, this Fund, for which the United Nations Development Program (UNDP) is still acting as interim manager, had received contributions of over US\$ 8.5 million from the United Kingdom’s Department of International Development (DFID) and the Australian Agency for International Development (AusAID) as of 2012.⁵⁹ The ICR, however, observed that only 60 percent of the target for April 2011 (9 million British pounds, or nearly US\$ 14 million) had been received by ICCTF from DFID by 2012, thereby clearly under-achieving the target.⁶⁰ These contributions, primarily from the UK (US\$ 19 million), but also much smaller amounts from Australia and Sweden, however, apparently had risen to more than US\$ 20 million by September 2013, while more than US\$ 8 million had been committed and US\$ 4.5 million disbursed from the Fund as of that time.⁶¹

4.22 The Norwegian pledge of support for REDD+ merits particular attention and has been the subject of a recent preliminary assessment by the Center for Global Development (CGD) in Washington, D.C.⁶² As observed above, in May 2010, the Governments of Norway and Indonesia entered into an agreement through which the former would provide up to US\$ 1 billion for verified reductions in GHG emissions from deforestation. The Agreement was expected to be implemented in three phases: (i) “preparation,” in which the “building blocks” for a national REDD+ program would be established, including development of a strategy, capacity for monitoring emissions from deforestation, a financial mechanism for receiving payments for performance, and creation of a new agency reporting directly to the President to coordinate REDD+ activities; (ii) “transformation” in which the country would continue

⁵⁸ World Bank, *CC DPL-I ICR*, *op. cit.*, pg. 17.

⁵⁹ ICCTF website, *Finance and Performance*.

⁶⁰ World Bank, *CC DPL-I ICR*, *op. cit.*, pp vi-vii.

⁶¹ See *Indonesia Climate Change Trust Fund*, Climate Funds Update, Heinrich Boll Stiftung (online)

⁶² See Frances Seymour, Nancy Birdsall, and William Savedoff, *The Indonesia-Norway REDD+ Agreement: A Glass Half-Full*, CGD Policy Paper 56, Washington D.C., February 2015, from which the following observations are drawn.

phase one activities while implementing new policies, including a two-year moratorium on new forest exploitation licenses, enhanced law enforcement, and pilot programs in two provinces; and (iii) “contribution for verified emissions reduction,” during which Norway would make annual payments for performance against a national reference level, building on experience in one or more pilot provinces. US\$ 200 million could be used for the first two phases and the balance for phase three. As in the case of the ICCTF, the grant funds would be channeled through UNDP.

4.23 According to Center for Global Development (CDG), progress through the first three phases under the LOI between the Governments of Norway and Indonesia “proved uneven.” A moratorium on new forest exploitation licenses was imposed in May 2011, nearly five months after initially promised but was “narrowly crafted, limiting its potential impact on deforestation.” It also took over three years to formally create the new REDD+ Agency, and its head was only appointed in December 2013. This was due in good measure to resistance on the part of the Ministry of Forestry, which disagreed with establishment of the agency under the President’s office. This agency was then disbanded after the new administration took office in late 2014 and has now been placed under the Ministry of Environment and Forestry. CDG reported that staff of the new agency were still “struggling to surmount political, legal, and bureaucratic hurdles to making the financial mechanism operational” in November 2014. In the meantime, analysis of satellite imagery published in late 2013 showed that deforestation had actually increased during the period that the Agreement had been in effect, and because no progress had been made in reducing forest-related emissions, no performance-based payments had yet been issued, and Norway has only released some US\$ 50 million for the “preparation” and “early transformation” phases to date. Thus, the inflow of grant funds from this source has been much slower than originally anticipated

4.24 With respect to **policy coordination**, achievements likewise seem to have been less substantial and slower than originally hoped. In terms of incentives for climate change action at the sub-national level. MOF and BAPPENAS reportedly held discussions and undertook “technical studies” to improve the design of the Special Allocation Fund (DAK) in order to provide more explicit climate change-related incentives for sub-national governments, but this “proved difficult because of the cross sectoral nature of climate change and the sectoral nature of the existing DAK,” which involves 19 different sectors. As interim measures, however, the Government increased the allocation for the forestry sector and MOFR issued technical guidelines for using the Forestry DAK to improve incentives for better forest management in line with climate change needs while the Finance Ministry continued analytical work on the issue. This notwithstanding, according to Bank staff interviewed by IEG in August 2015, the Government has not succeeded in finalizing a fiscal transfer mechanism to provide incentives for local governments to take priority climate change actions, thereby failing to meet another important trigger for the proposed second DPL.

4.25 Also with respect to mitigation, even though the original design of the CC DPL operations did not contain a specific policy subarea for **GHG measurement and monitoring** or a corresponding results indicator, the ICR indicated that “in later periods, the GOI also wanted to record progress in developing a monitoring mechanism for carbon emissions and absorption through establishment of a National GHG Inventory System.” It also noted that, after the Government submitted the Second National Communication to UNFCCC in 2011, it

issued Presidential Regulation (No. 7/2011) making the Ministry of Environment responsible for developing this System with inputs from the line ministries. In addition, work was reportedly occurring at the provincial and local levels to improve the data used for national and sub-national inventories and the Government hoped to have “established a solid foundation for GHG inventory preparation, in line with reporting requirements under the UNFCCC” by 2014. However, progress to date with respect to the development of this inventory is not known and, in any event, its results have not been made public.

Outcomes

4.26 The ultimate desired outcome of Government efforts to develop a lower-carbon growth path is a reduction in Indonesia’s greenhouse gas emissions. In this regard, the CC DPL series appropriately focused on the three main sources of such emissions: (i) land use, land use change, and forestry (LULUCF); (ii) peatland fires; and (iii) the energy sector. As noted in para. 2.5, LULUCF and peat fires together were responsible for more than three-fifths of the country’s GHG emissions and the energy sector for more than 20 percent in 2005, thus together accounting for more than four-fifths of the total. Energy-related emissions were expected to grow rapidly in the future, both as a result of the country’s predominantly coal-based power generation and growing demand for fossil fuels by the transport sector resulting from increasing vehicle ownership and urbanization.⁶³

4.27 Although delayed in relation to its originally expected issue date, as observed above, a Presidential Regulation for the *National Action Plan for Greenhouse Emissions Reduction* (RAN-GRK) was promulgated in September 2011, thereby formalizing the President’s 2009 commitment that the country would voluntarily pursue a 26 percent reduction in its GHG emissions by 2020.⁶⁴ This Plan set specific targets for the forestry and peatland, energy, and other sectors and indicated the policies, strategies, and specific actions designed to achieve them. Annex 4 reproduces the emissions reduction targets together with the associated policies and strategies to be pursued for forestry and peatlands and for the energy and transport sectors, respectively. Comparing the two sets of targets, those using the country’s own resources (i.e., the initial 26 percent reduction) were much more ambitious for the forestry and peatland sectors than for energy and transport, indicating the need for a higher level of international financing for the latter.⁶⁵

4.28 Considering the overall objective to reduce GHG emissions and the means proposed for achieving this in RAN-GRK, which were also included among the policy subareas for the CC DPL series (i.e., stem deforestation, improve peatland management and forest governance, promote renewable energy and energy efficiency, etc.), it is useful to ascertain what has happened since 2009 with respect to GHG emissions in Indonesia. Official

⁶³ World Bank, *Indonesia CC DPL-IPD*, *op. cit.* para 86, pg. 27 stated that “industrial use and electricity sector are both large sources of emissions, but emissions from power generation, and to a lesser extent, from transport, are growing most rapidly.”

⁶⁴ Republic of Indonesia, *Presidential Regulation of the Republic of Indonesia No. 61 Year 2011 on the National Action Plan for Greenhouse Gas Emissions Reduction*, Jakarta, September 20, 2011, pg. 1.

⁶⁵ Similar targets, policies, strategies, and actions were identified for the agricultural, industrial, and waste management sectors and the locations where the actions were expected to take place were also indicated.

emissions data were last reported for 2005 in the Second National Communication to the UNFCCC, and, thus are now ten years old. Even though the national GHG inventory is reportedly in the process of being updated, results have not been released. However, there are indications that GHG emissions have continued to increase over the past decade in both the LULUCF (including peatlands) and energy sectors. The World Resources Institute (WRI) has published data on the evolution of Indonesia's GHG emissions between 2005 and 2012 (the most recent year for which data are available) in million tons of CO₂ equivalent (mtCO_{2e}) that are reproduced in Table 4, including emissions due both to LULUCF and other (primarily energy) sources. These data suggest that annual emissions have risen over this period with a progressive increase in non-LULUCF ones and variable, but nonetheless, occasionally substantial ones from land use and forestry sources, although the large jump between 2005 and 2006 is likely due to changes in the methodology of identifying such emissions.

4.29 As concerns **LULUCF**, emissions are closely associated with deforestation that also appears to have continued to rise over the past decade. One source reports that “Indonesia lost 840,000 hectares of forest in 2012 and has also “greatly under-reported how much primary rainforest it is cutting down, according to the Government’s former head of forestry data gathering,” noting further that “UN and Government figures have maintained that the country with the third biggest stretch of tropical forest after the Amazon and Congo was losing 310,000 hectares of forest a year between 2000 and 2005, increasing to 690,000 hectares annually from 2006 to 2010.”⁶⁶ And, as observed above, the Center for Global Development (CGD) has affirmed that “new satellite imagery analysis published in November 2013 revealed that Indonesia’s deforestation rate had actually been *increasing* during the period in which the [Indonesia-Norway REDD+] Agreement had been in effect rather than decreasing.”⁶⁷ According to CGD, “among the key drivers of deforestation are commercial-scale expansion of plantations to produce palm oil and fast-growing timber for the pulp and paper industry.”⁶⁸

⁶⁶ See The Guardian, *Rate of Deforestation in Indonesia Overtakes Brazil, Says Study*, June 29, 2014. The study referred to was by Belinda Arunarwati Margono, Peter Potapov, Svetlana Turubanova, Fred Stolle, and Matthew Hansen, entitled *Primary Forest Cover Loss in Indonesia 2010-12*, and published in the online journal *National Climate Change* on the same date. According to this source, the remote sensing data suggested that much of the additional deforestation came from the felling of primary forest in wetlands and government protected areas.

⁶⁷ Seymour, et. al., *op. cit.*, pg. 4. Emphasis in the original.

⁶⁸ *Ibid*, pg. 5. Although these are also carbon sinks, they do not offset the amount of carbon released to the atmosphere as the result of deforestation and associated fires.

Table 4: Greenhouse Gas Emissions in Indonesia, 2006-2014 (mtCO₂e)

<i>Year</i>	<i>With LULUCF</i>	<i>Without LULUCF</i>
2005	1,583.83	626.62
2006	1,967.28	645.92
2007	1,912.41	665.30
2008	1,902.90	665.39
2009	1,959.49	687.94
2010	1,928.02	709.28
2011	1,950.71	722.74
2012	1,981.0	760.81
Source: WRI CAIT		

4.30 Other factors underlying the continuing pressures on Indonesia’s forests, according to CGD, are: (i) an economic growth model aligned with business as usual; (ii) a limited constituency for change; (iii) a problematic land tenure situation; and (iv) decentralized, confused and contested land use decision making together with broader national governance challenges and disappointment about the scale of financing pledged by international sources to help combat deforestation. As concerns the first of these elements, CGD observes that the Government’s emission reduction targets “were accompanied by another target: for 7 percent annual growth...[but that] without fundamental change in Indonesia’s political economy, a portion of that growth would likely be achieved at the expense of forests.” Some government officials have emphasized that the Government’s highest priorities were for meeting its economic growth target, suggesting that climate-related concerns were of secondary importance. In relation to the second, it states that “public understanding of global environmental issues is extremely limited...[and] those who benefit from and consume Indonesia’s commercially exploited natural resources are mostly concentrated in Java, where they are insulated from the adverse social and environmental impacts of forest destruction,” such as the annual fires and smoke. It likewise notes that “overlaps in jurisdictional authority has led to confusion, uncertainty, conflict, and increased opportunities for corruption,” which, in turn, make “forest reform all the more difficult because it requires the alignment of political champions across national, provincial, and district levels.”⁶⁹

4.31 Another source published in July 2014, affirmed that Indonesia had reached the highest deforestation rate in the world and added that “researchers at the University of Maryland said the country lost 15 million acres of forest – a common source of lumber for developers – between 2000 and 2012.” It also cited an interview with a managing director at Climate Advisers who said that “developers were moving into Indonesia’s wetlands, including the country’s peatland rainforests,” and noted that “Indonesia’s carbon emissions are projected to get even higher this year, as El Niño, expected to hit in 2014, will make forests dry and susceptible to fires.”⁷⁰ Finally, it confirmed that “fires in Indonesia’s forests

⁶⁹ Seymour, et. al, *op. cit.*, pg. 5-6. It cites as an example of the latter that “due to prevailing winds, the choking haze that annually closes airports and sends children to the hospital in Sumatra, Kalimantan, and even neighboring Singapore seldom affects Jakarta.”

⁷⁰ See also *El Niño, Forest Fires and Haze in Indonesia* Economic Quarterly: Hard Choices, World Bank, July 2014, *op. cit.*, which also discussed the dynamics of peatland fires.

and peat lands increased in March and were concentrated in areas managed by pulpwood, palm oil and logging companies.”⁷¹ Scientists and researchers interviewed by IEG confirmed that there are signs that 2015 is likely to be an even more severe El Niño year, further increasing the risk of fires, which are caused by human intervention (i.e., deliberately set) rather than by lightning strikes or other natural causes,⁷² leading to further increases on greenhouse gas emissions.⁷³

4.32 Thus, there is strong evidence that deforestation and associated forest fires have continued to rise in recent years despite the measures proscribed by the Government to reduce them, including those supported by the CC DPL operation.⁷⁴ This also appears to be the case in the **peatlands** as the result of the conversion of forested areas for oil palm plantations and other agricultural activities. A recent blog from CIFOR entitled *Forest News*, for example, revealed that “scientists monitoring the amount of carbon accumulated in Indonesia’s peatland forests over thousands of years have predicted that millions of tons of carbon dioxide could be released into the atmosphere if they continue to be cleared, drained, and burned for oil palm and agricultural plantations,” adding that “more than 100,000 hectares of peatland forests are destroyed each year for oil palm and agricultural plantations.”⁷⁵ It can, thus, be concluded that the impact of the policy actions taken in connections with the CC DPL operation with respect to the mitigation of GHG emissions from land use and forestry sources, including peatlands, have been very limited to date despite the increase in the number of REDD+ demonstration sites.

⁷¹ See, Xander Landen, *Indonesia Reaches Highest Deforestation Rate in the World*, PBS Newshour Science, July 6, 2014, pp. 1-2. A WRI blog by Ariana Alisjabana, Fred Stolle, and Belinda Margono, published on June 30, 2014 and entitled *New Study Shows Indonesia Losing Primary Forest at Unprecedented Rates*, likewise indicated that Indonesia “now has the highest rate of loss of tropical forests in the world.... [and] reiterated that “from 2000 to 2012, Indonesia has lost more than 6 million hectares of primary forest – an area half the size of England.” (pg. 1)

⁷² The fire risk is greater due to increased dryness of vegetation and soils, including in peatlands, in areas affected by El Niño. See also *Special Issue on Local to Global Perspectives on Forest and Land Fires in Southeast Asia*, Mitigation and Adaptation Strategies for Global Change, edited by Daniel Murdiyarso and Louis Lebel, Volume 12, No, 1, 2007.

⁷³ According to an article on this year’s El Niño in *The Economist* (August 22nd-28th 2015, pg. 60), “if this year’s El Niño is a whopper, Indonesia could dry up, hurting coffee harvests and palm oil production. Its hydroelectric power might stall. And forest fires across its parched landscape would add up to 2 billion tons of CO₂ to the atmosphere (equivalent to 5 percent of worldwide human-related releases of the gas for the year).

⁷⁴ WRI’s Global Forest Watch data do show an apparent decrease in deforestation in Indonesia in 2013 compared with 2012, but the reasons for this are unclear. It also notes a very considerable increase in deforestation in 2009 compared with 2008 and in 2011 and 2012 compared with 2010, so at the very least it can be concluded that deforestation appears to vary considerably from one year to the next and most of this loss has occurred in Kalimantan and Sumatra.

⁷⁵ See Catriona Moss, *Peatland Loss Could Emit 2,800 Years’ Worth of Carbon in an Evolutionary Eyeblink: Study*, CIFOR Forest News, January 14, 2015. A model was used to create a number of scenarios to predict the future impacts of forest clearing and peat burning for oil palm conversion. It found that of the 3,300 tons of carbon per hectare stored in Indonesia’s coastal peatland areas, up to half would be released into the atmosphere over the 100 years following conversion to oil palm plantations – the equivalent of 2,800 years’ worth of accumulated carbon.” (pp. 1-2)

4.33 Turning to the **energy sector**, while the Bank- and CTF-supported investments to help expand Indonesia's geothermal energy generation capacity are steps in the right direction, it will still take a number of years for this additional capacity to come on line. According to the most recent Implementation Status and Results (ISR) Report, the project has been restructured twice and the closing date extended from March 31, 2015 to December 31, 2018, due to significant implementation delays, while only 2 percent of the Bank loan (US\$ 4.1 million) and 18 percent of the CTF loan (US\$ 22.1 million) had been disbursed by June 17, 2015.⁷⁶

4.34 Examining the evolution of the sources of energy consumed in Indonesia between 2005 and 2013, it is evident that energy consumption has risen as the national economy itself has grown over time. Furthermore, while consumption of primary energy from hydroelectric plants and derived from other renewable sources has increased in absolute terms, their shares of total energy consumed in the country nevertheless remain very small, jointly accounting for just 3.5 percent of the total in 2013. Meanwhile, even though the shares of both oil and natural gas in national energy consumption have declined over this period, that of coal has risen substantially, from 21 percent in 2005 to nearly one-third of the total in 2013, as Table 5 below shows.

Table 5: Sources of Indonesia's Primary Energy Consumption (million tons of oil equivalent and percent of total) for Selected Years, 2005-2013.

<i>Energy Source/Year</i>	<i>2005</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2005</i>	<i>2009</i>	<i>2013</i>
Coal	25.4	34.6	41.2	48.9	50.4	54.4	21.2	25.7	32.2
Oil	60.7	61.6	66.4	72.3	73.2	73.8	50.6	45.8	43.7
Natural Gas	29.9	33.6	36.3	33.5	32.2	34.6	24.9	25.0	20.5
Total Fossil Fuels	116.0	129.8	143.9	154.7	155.8	162.8	96.7	96.5	96.4
Hydroelectricity	2.4	2.6	3.9	2.8	2.9	3.5	2.0	1.9	2.1
Other Renewables	1.5	2.1	2.1	2.2	2.2	2.3	1.3	1.4	1.4
Total	120.0	134.5	150.0	159.8	161.0	168.7	100.0	100.0	100.0

Source: British Petroleum, Statistical Review of World Energy, June 2014

4.35 These figures confirm the heavy predominance of fossil fuels in the current energy mix and reveal that much of the growth in renewables other than hydropower, in fact, occurred between 2005 and 2009. It is likewise useful to compare Indonesia's coal, oil, and natural gas production with its domestic consumption of these fuels over the same period. As indicated in Table 6, coal production expanded more than two and a half times between 2005 and 2013, while oil production fell and that of natural gas was at roughly the same level in absolute terms in 2012-13 as in 2005. However, domestic coal production was substantially greater than national consumption throughout the period, as much of domestic output is

⁷⁶ World Bank, *Implementation Status and Results Report for Indonesia Clean Energy Investment Project*, June 17, 2015, pg. 6 (pg. 1). Bank staff clarified that the implementation delays were due primarily to technical and operational problems, including the discovery of less geothermal energy potential at one of the sites where project investments had initially been planned, leading to the need to find an alternative site.

exported. Not surprisingly, nearly a third (31.5 percent) of Indonesia's total exports in terms of value in 2013 was comprised of oil and mineral fuels, presumably primarily coal.⁷⁷

⁷⁷ Michigan State University, *Indonesia Trade Statistics*, Global Edge,

Table 6: Fossil Fuel Energy Production in Indonesia (million tons oil equivalent and percent of total) for Selected Years 2005-2013.

<i>Energy Source/Year</i>	<i>2005</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2005</i>	<i>2009</i>	<i>2013</i>
Coal	93.9	157.6	169.2	217.3	237.4	258.9	44.4	58.3	70.9
Oil	53.7	48.2	48.6	46.3	44.6	42.7	25.4	17.8	11.7
Natural Gas	64.1	64.7	73.8	68.3	64.0	63.4	30.3	23.9	17.4
Total	211.7	270.5	291.6	331.9	346.0	365.0	100.0	100.0	100.0
<i>Source: British Petroleum, Statistical Review of World Energy, June 2014</i>									

4.36 In short, coal and other fossil fuel production continues to be important for the Indonesian economy as well as for its balance of payments, and the participation of coal in fossil fuel production has grown very substantially over the past decade, accounting for more than 70 percent in 2013 compared with 44 percent in 2005. There has been a similar pattern with respect to the use of coal for domestic energy consumption. Thus, it is very likely that GHG emissions have followed a parallel upward track even if there have been some gains in terms of greater energy efficiency and increased production of renewables, as Table 4 above suggests. Once the new Bank/CTF-supported geothermal plants become operational later in the decade, this situation is likely to improve somewhat but, as it generally takes a long time for a national energy matrix to change significantly, all indications are that fossil fuels will continue to dominate for the foreseeable future. Thus, at least in the short and medium run, gains in terms of emissions reductions from energy (and transport) sources are also likely to be modest.

4.37 Thus as was the case with respect to mitigation of GHG emissions in the land use and forestry sectors, outcomes to date with respect to emission reductions in the energy sector in Indonesia have been limited. Its dependence on fossil fuels remains extremely high. Efforts to reduce both electricity and fuel subsidies have occurred only recently and, while moving in the right direction, appear to have had little impact on energy consumption to date. REDD+ activities have also been substantially delayed and deforestation appears to continue at a high rate, while fires may become even more widespread in the foreseeable future as the result of the expected strong El Niño year. Recent media reports indicate that smoke from increased burning in neighboring parts of Indonesia are currently again a significant problem for both Singapore and Malaysia. Thus, land use and fires persist as important but largely unresolved challenges. Together with the energy sector, they also remain likely growing sources of carbon emissions. In this context, GOI actions to move to a low-carbon economy, including those supported by the CC DPL, have had only **modest** outcomes to date.

Objective 2: Support Government Efforts to Develop a Climate-Resilient Growth Path

Outputs

4.38 This objective was to be supported by the four policy action subareas under the CC DPL's **adaptation** agenda. The first refers to the **water resource sector**. According to the ICR, the Ministry of Public Works (MPW) continued to make progress on the strategic assessment of the water future of Java and prepared an action plan for priority interventions as part of the River Basin Strategic Water Plans, which would seem to meet the indicative action for 2010. However, it did not specifically confirm that this action plan incorporated climate change, urbanization, economic development and food security, as the indicative actions also required. On the other hand, it reported that 18 water councils were formed in as many provinces in 2010, thereby substantially exceeding the target of 12, and 8 River Basin Plans were approved by the MPW, also meeting the 2010 target in this respect. It added that 4 more such plans were approved in 2011, as were draft master plans for two key (unidentified) river basins. By June 2013, the number of water management plans (POLAs) had risen from the baseline of 3 in 2009 and 5 in 2010 to a 29 for basins under provincial authority and 13 for those under that of the national government. These plans reportedly established "a uniform information baseline and adaptive management approaches that will help basin managers adapt to an uncertain future."⁷⁸ But the ICR did not confirm whether the target of 12 Coordination Teams for water resource management in river basins (TKPSDA) also an indicative action for 2010 had been met, nor did it comment on achievements in relation to the indicative action for 2011 (i.e., to complete master plans for the Java River Basins that include climate change actions by enacting ministerial decree).⁷⁹

4.39 Government officials data confirm (see Table 7) that good progress has been made in terms of the number of strategic plans (POLAs) for central basins that have been finalized, but less so with respect to the more detailed master plans, the vast majority of which are either in process or have been drafted but not yet finalized. Even so, as the results indicator for this policy area referred specifically to strategic water management plans in key river basins, it appears to have been achieved, making it another of the more successful policy areas supported by the CC DPL.

⁷⁸ World Bank, *CC DPL-I ICR*, *op. cit.*, pg. 15.

⁷⁹ According to the AFD/JICA evaluation (*op. cit.*, pg. 95), progress in this regard included: (i) strategic assessment of the future of water resources on Java island was conducted in 2010; (ii) provincial Water Resources Councils have been in place since 2010; (iii) integrated water resources management plans (POLA) incorporating climate change assessment have been developed for the national strategic river basins on Java island since 2008; and (iv) the River Basin Master Plans have been prepared since 2010.

Table 7: Status of Strategic and Master Water Management Plans, 2014

<i>Type of Plan</i>	<i>Finalized</i>	<i>Drafted</i>	<i>In Process</i>
POLA/Strategic Plans	35 (central basins)	19	1
	8 (provincial basins)	27	12
Rencana/Master Plans	2 (central basins)	17	24
	1 (provincial basin)	2	-
<i>Note:</i> Central government plans are for river basins that cross two or more provinces, while provincial basins are ones located entirely within a single province, and, thus, under provincial rather than central government authority.			
<i>Source:</i> World Bank Water Resources and Irrigation Specialist, personal communication			

4.40 In relation to **the agriculture sector**, the Ministry of Agriculture (MOA) reportedly continued to strengthen and scale up efforts to improve the resilience of farm production and reduce drought risk and that the System for Rice Intensification (SRI) had been completed in 62 units in 16 districts in 8 provinces, while the Climate Field School had completed 261 units in 243 districts in 29 provinces by two MOA directorates. These latter figures presumably refer to 2010, as the ICR also indicated that 599 units were completed in 2011 and that the guidance provided focused on pest and disease control measures and water management in non-irrigated areas. However, the ICR rated performance in this sector under the CC DPL operation as only “moderately satisfactory” and the baseline survey that was to be undertaken to assess the extent of farmers’ understanding and practice of adaptation techniques due to the Ministry’s actions was not carried out. The ICR nonetheless argued that the associated objective (i.e., to scale up actions to improve climate resilience in agriculture) was “partially achieved” because Presidential Instruction No. 5/2011 “obliges MOA and other GOI agencies (sic) mainstream climate smart agriculture practices, including support to farmers’ groups.”⁸⁰ However, it said nothing with respect to the other aspect of the indicative actions for this subarea, to enforce land development and management without burning as part of an overall plan based on MOA Decree No. 26/2007 (2010) and to continue to make progress in this regard (2011).

4.41 According to experts interviewed by IEG, enforcement of land development and management without burning has not occurred. In fact, this is a persisting problem in Indonesia and is one of the causes of fires which often get out of control, thereby contributing significantly to GHG emissions. In addition, there are a number of perverse incentives which actually stimulate and “reward” the proliferation of fires, including emergency funds made available to local governments to fight fires once they start. Another factor complicating enforcement in this regard is the high degree of autonomy of provincial and local governments, which often pursue their own economic interests rather than complying with central regulations. This is one of the principal “downsides” of Indonesia’s decentralization policies.

4.42 As concerns **disaster risk management**, progress was better. Starting with a baseline of 5 provincial and 20 district disaster management agencies in 2009, by 2012 coverage had expanded to 33 provinces, representing 97 percent coverage, and branch offices in 400

⁸⁰ World Bank, *CC DPL-IICR*, *op. cit.*, pg. 15.

districts (out of a total of 501, or a coverage of 80 percent), meeting the target. Thirty-two agencies are now regularly budgeted regularly and operational” although capacity building was “ongoing.”⁸¹ Thus, the indicative action for 2010 was met, but the ICR did not confirm whether those initially proposed for 2011 (i.e., implement Disaster Risk Reduction (DRR) program activities according to the National Action Plan for DRR) and 2012 (implement comprehensive risk financing framework combining mechanisms, including reserve budget, stand-by financing, and weather derivatives) were also achieved.

4.43 Bank staff confirmed that implementation of the National Disaster Risk Reduction program activities is indeed occurring at the sectoral level (i.e., in the affected line ministries), and that the disaster management agencies were established in all of the provinces and some districts. He also confirmed that some disaster risk financing mechanisms, including the reserve (on-call budget) and stand-by financing have been implemented, but that, to date, weather derivatives have not. More generally, he noted that the Bank had established good relations with the natural disaster agency and financed several prior investment projects in this area, which contributed to the comparatively good performance of this policy area.

4.44 The fourth policy subarea related to improved climate resilience was for the **marine and fisheries** sector. As in the case of agriculture, the baseline values for community awareness and climate preparedness practices in coastal areas were never determined and, thus, results in relation to this proposed indicator were not available. The ICR nonetheless argued that the objective to establish systems and strategies to improve climate preparedness and resilience in the coastal/marine sector was “partially achieved” because the Ministry of Marine Affairs and Fisheries (MMAF) was “running the national ‘Development of Resilient Coastal Villages’ program in 22 districts throughout Indonesia” and that national strategy was being implemented “with site-level activities.” This Program was apparently completed in mid-2010 and a strategic plan for a “model coastal village” was finalized in 2011, while MMAF also finished a study on coastal vulnerability to sea level rise in Java, Bali, and West Sumatra in 2010. In addition, the Ministry updated its Strategic Plan for Blue Carbon Research for 2011-2014 and released it for public review.⁸² However, while the Indonesian Global Ocean Observing System (INAGOOS) Data Center and Secretariat was established by MMAF in Jakarta in 2010, the ICR did not comment on the proposed indicative actions for 2010 to develop a plan for climate resilient villages in 8 vulnerable districts on the north coast of Java, nor on the indicators for 2011-2012 involving the continuing implementation of the strategy for coastal community resilience to cope with climate change and implementation of the vulnerability to sea level rise in Java and Bali.

4.45 Bank staff confirmed that INAGOOS is fully operational and that a strategy had been developed for coastal community resilience to cope with climate change. However, the extent to which this strategy has been implemented to date is not clear.⁸³ On the other hand,

⁸¹ World Bank, *CC DPL-ICR*, *op. cit.*, pg. v-vi.

⁸² *Ibid*, pg. 16.

⁸³ According to a communication from a local Bank specialist, dated September 2, 2015, this question was discussed with a Planning Bureau official at the MMAF, who stated that it was difficult to say if this strategy had been implemented as such, as there were many relevant programs that were considered a part of or became

the Bank has now established a very good working relationship with the Ministry of Marine Affairs and Fisheries, particularly in connection with the two relatively new initiatives mentioned above that build directly from its earlier involvement with this Ministry in connection with its participation in the CC DPL.

4.46 Even though there were no associated indicative actions or results indicators, the ICR also reported on progress regarding **climate forecasting and impact and vulnerability assessment**, an area in which GOI and the development partners decided to add after the initial CC DPL period, according to this source. It stated that, under this focal area, in addition to the 2010 establishment of INAGOOS mentioned in the previous paragraph, the Government took the following steps to strengthen the institutional framework and capacity for scientific research on adaptation: (i) the Meteorological Agency (BMKG) developed a climate change modeling program to assess impact and vulnerability, completed seven modelling scenarios, and a vulnerability assessment study in East, Central, and West Java; and (ii) MMAF published its strategic plan for INAGOOS for 2011-14 and it became part of the Regulation for RAN-GRK (i.e., for the *National Plan for Reduction of Greenhouse Gas Emissions* for 2010-2020, issued in June 2011).⁸⁴ The ICR rated performance in this focal area as only “moderately satisfactory” – the same rating as for CC DPL performance in relation to the marine and fisheries sector, climate resilient agriculture, peatland conservation, and forest management and governance – but it did not provide an explanation for this assessment.

4.47 Finally, it is noteworthy with respect to climate resilience that Indonesia published the Synthesis Report of the *National Action Plan for Climate Change Adaptation* (RAN-API) in November 2013. This report was issued jointly by BAPPENAS, the Ministry of Environment, the National Council on Climate Change (DNPI), and BMKG.⁸⁵ The action plan considers changes in surface temperatures, rainfall, sea level rise, and weather and climate extreme events, based both on empirical observations and IPCC (International Panel on Climate Change) models and summarizes the level of climate change and associated public health risks in the country by region for: (i) decrease in water availability; (ii) floods; (iii) droughts; (iv) coastal inundation; (v) spread of dengue; (vi) spread of malaria; (vii) spread of diarrhea; (viii) decrease in rice production; and (ix) forest fires. Considering economic, livelihoods, ecosystem, and “special area” resilience, the Synthesis Report for the Plan then outlines generic targets, strategies and clusters of actions for: (i) food security and energy security (economic); and (ii) health, settlement, and infrastructure (livelihoods); and (iii) urban areas and coastal and small island areas (special areas). While some of these areas were also the subject of resilience-related policy actions under the Bank-supported CC DPL operation (e.g., coastal ones), this Plan is considerably broader in scope and ambition.

an input to the National Strategy for Marine Affairs and Fisheries that included measures related to climate change.

⁸⁴World Bank, *CC DPL-I ICR*, *op. cit.*, pg. 16.

⁸⁵ Republic of Indonesia, *National Action Plan for Climate Change Adaptation (RAN-API): Synthesis Report*, Jakarta, November 2013, pg. 2.

Outcomes

4.48 Unlike the situation with regard to Government efforts to develop a low-carbon growth path, it is difficult at this juncture to assess outcomes of policy actions taken to date in terms of increased resilience to climate change in Indonesia, as these depend in part on the occurrence and localized effects of extreme weather events, including flooding and droughts, as well as gradual temperature and sea level rise, that affect water resources, agricultural production and productivity, and coastal areas, livelihoods, and marine ecosystems. Many of the potential negative economic, social and environmental impacts of climate change, moreover, such as those due to increases in temperature, rainfall variability, and ocean warming, moreover, will occur very gradually over the long term and, thus, their true impacts are likely to be perceived only decades into the future.

4.49 The abovementioned constraints notwithstanding, the adaptation actions supported by the CC DPL operation were targeted on key areas of vulnerability and, particularly in the case of disaster risk management and coastal and marine protection, hold the potential to increase Indonesia's resilience to the adverse impacts of climate change, if sustained and expanded over time. Similarly, those measures taken with respect to strengthening climate forecasting, vulnerability assessment, integrated water resource management (IWRM) at the river basin level and increasing the resilience of agricultural, especially rice production, are likely to be of importance in terms of enhancing future water and food security in the country, again assuming in the case of IWRM that the measures proposed in the various river basin plans are adequately implemented and climate-resilient agricultural approaches are well-disseminated and applied by farmers over time.

4.50 In all cases, however, the policy actions recognized and supported by the CC DPL constitute important first steps in terms of strengthening Indonesia's institutional capacity at the national and subnational, particularly provincial, levels to address the likely increasingly severe future impacts of global climate change, and the more recent National Action Plan for Climate Change Adaptation (RAN-API, if properly implemented, should further enhance the effectiveness of Indonesia's ongoing efforts in this regard. But, as in the case of the CC DPLs policy actions for mitigation, outcomes in the short and medium term of those for adaptation are likely to be **modest**.

Other Program Impacts

4.51 While the AFD/JICA joint evaluation did not seek to assess program performance in relation to the wider objectives/ultimate desired outcomes considered above, it did examine other aspects. It indicated, for example, that the effect of the budget support program on changes in financing, national institutional arrangements, and government progress on mainstreaming climate change issues into policy were limited. With respect to the program's **financial impact**, more specifically, it concluded that "the amounts of funding provided under the CCPL are small from a macroeconomic perspective (less than 0.7% of the revenue of the GOI). Hence, the CCPL had very little direct effect on the efficiency of external funding as part of the national budget process. Moreover, the GOI's fiscal position was and remained sound. Nevertheless, the disbursements of the CCPL at a time of crisis provided

some countercyclical support, which was a valuable input, without jeopardizing debt sustainability.” On the other hand, it also noted that because the amount of budget support was not very significant in regard to the Government’s financial resources, “this inevitably raises the issue of limited leverage regarding the orientation of climate change policy.”⁸⁶

4.52 The joint evaluation noted that the CCPL contributed to identifying climate-change-related public expenditure, that climate change policies were now taken into consideration in Performance Based Budgeting (PBB), and that it led to publication of a GOI roadmap for dealing with the reduction in energy subsidies. However, it also recognized that this took time and a decision about subsidies was not made until 2013. Thus, in this important policy area, as in numerous others, implementation delays occurred, and intended program outputs did not materialize until several years after the Government and the development partners, including the Bank, decided to suspend the program as originally designed. The joint evaluation concluded that it had only a “moderate influence” on public financial management, in terms of resulting in better identification of climate-change-related expenditures.

4.53 As concerns the program’s **policy consistency with and mainstreaming of Government priorities**, the ADF/JICA evaluation found that the CCPL was designed taking into consideration the already advanced national strategy on climate change along the lines of the Donors’ climate change approach. Other pertinent effects were also generally deemed positive, as the following statements indicate: (i) the CCPL, due to its regular check-ups on performance and incentives for compliance in the form of renewed funding, is widely recognized among officials and agencies as having contributed to bringing the issue of climate change to the center of Government policy development and implementation; and (ii) the CCPL had an impact on the mainstreaming of climate change issues to the extent that it contributed to maintaining and crystallizing the climate change momentum sparked by the UNFCCC 13th Conference of the Parties in Bali.⁸⁷

4.54 On the **institutional side**, results were also mixed. On the one hand, according to the ADF/JICA joint assessment, “by enhancing the national information system, through the monitoring process and the strengthening of climate-change-related institutions, the CCPL had considerable influence on the quality of the climate change policy processes and their implementation.”⁸⁸ However, it also concluded that “insufficient awareness and incentives for the line ministries highlighted that progress could be made in establishing a well-functioning framework for dialogue between ministries” and that there had been no “significant improvement” in terms of civil society participation in national and subnational climate change policy formulation and implementation. The ICR, in turn, indicates that one of the shortcomings associated with the program was the failure to communicate the

⁸⁶ AFD/JICA, *Joint Evaluation of CCPL*, *op. cit.*, pg. 9.

⁸⁷ *Ibid*, pp. 9-10.

⁸⁸ It also stated (pg. 11) that “through its various committees, the CCPL created a framework for discussion focused on the GOI’s strategies on climate change, thus improving communication between the ministries and the Donors.”

intentions of the DPL in relation to the need for borrowing and it concluded that “clear and open communication is needed for a strong partnership.”⁸⁹

4.55 On the positive side, finally, it should be recognized that the Bank’s involvement in the CC DPL served as an important platform for stepping up and consolidating the **policy dialogue** with the Indonesian Government in relation to the GOI’s program to address climate change. As the ICR points out, even though policy-based financing for the second phase of the Government’s climate change program did not extend beyond 2010, monitoring of the 2011 matrix by the development partners, including the Bank and ADB, continued beyond the life of the DPL itself, and a final steering committee meeting was organized by the Government in November 2012.⁹⁰ Bank staff highlighted the important role played by the CC DPL, despite its disappointing results, in terms of the Bank’s ongoing policy dialogue and lending/grant activities in support of the GOI’s climate change initiatives.

5. Ratings

Outcome

5.1 The relevance of objectives is rated **High**, as Indonesia is both a significant contributor to global greenhouse gas emissions and is highly vulnerable to the likely increasingly adverse impacts of climate change. The quality of program design is rated **Substantial**. The CC DPL series sought to help the Government address the major sources of GHG emissions, land use change, including forest and peat land conversion and burning, and the fossil fuel-dominated energy sector, enhance climate resilience in four key sectors, and further strengthen the country’s institutional capacity to address mitigation and adaptation priorities. In practice, however, several significant policy areas proved to be too ambitious given significant political economy and institutional constraints, together with unanticipated changes of top government officials and other exogenous factors. In addition, the Results Framework could have been better designed, both in terms of the specific cause and effect linkages between recognized prior and proposed indicative policy actions and expected outcomes and in relation to the nature and coverage of some of the monitoring indicators.

5.2 The joint AFD/JICA evaluation concluded, moreover, that the comparatively small amount of funding involved in relation to the size of the Indonesian public sector budget meant the program possessed limited leverage with respect to climate change policy and government policy making more generally in a context in which economic growth was – and continues to be -- the highest priority. On the other hand, given GOI’s subsequent decision not to borrow for climate change-related activities, it is unlikely that it would have been willing to accept larger loans for this purpose even if the resources, in fact, were still being used for general budget support. While the Government’s inability to meet two of the initially agreed triggers for the second CC DPL in 2010-11, while a third one was delayed, undoubtedly clearly played a role from the Bank’s perspective, GOI’s reluctance to borrow

⁸⁹ World Bank, *CC DPL ICR*, *op. cit.*, pp. 23-24.

⁹⁰ *Ibid.* pg. 9.

for climate change is the official reason why it decided to suspend the proposed DPL series after just one operation.

5.3 Efficacy was assessed separately in terms of the extent to which the CC DPL operation was able to support Government efforts to develop a low carbon growth path and its efforts to develop a more climate-resilient growth path over the expected program implementation period, taking into account that only one of the initially anticipated four loans actually went forward. The available evidence suggests that only limited progress has been made by the Government in recent years toward achieving a lower carbon and more climate-resilient growth path, although some positive steps (albeit with considerable delays in some instances) have been taken on both fronts. For this reason, while IEG recognizes that in politically and economically sensitive areas such as curbing deforestation, altering the national energy mix, and reducing energy subsidies, transformative change is difficult and takes time, outcomes in relation to both CC DPL objectives to date are rated *Modest*. In retrospect, given the challenging country institutional and governance context, a number of the policy subarea objectives, actions, and expected results were overly ambitious, even for a four year implementation period.

5.4 In addition, since the World Bank's CC DPL series was suspended after the first loan, it is unlikely that the CC DPL-I operation, in and of itself, played a significant role in the progress achieved to date. Both the Bank itself (e.g., through the subsequent Geothermal Clean Energy Project) and other donors, including UNDP and the Asian Development Bank (ADB), as well as AFD, JICA, the Government of Norway, and numerous other bilaterals, and Climate Investment Funds (CIFs), including the CTF and FIP, have also provided and/or pledged additional financial and/or technical assistance to Indonesia for climate change-related activities. Thus, it becomes nearly impossible to attribute actual results on the ground to CC DPL-supported policy actions *per se*. Furthermore, many of the achievements associated with the CC DPL series were, in fact, recognized prior actions that may be attributable in part to the existing CCPL program, co-financed by AFD and JICA, before the Bank formally decided to provide funding. And unlike both JICA and AFD, the Bank did not provide parallel technical assistance grants to help boost incentives for line ministry participation in the program.

5.5 The AFD/JICA joint evaluation suggests that the effects of these additional TA grants were limited, observing that while “the CCPL created a framework for discussion focused on the GOI’s climate change strategies...insufficient awareness and incentives for the line ministries, which sometimes resulted in underuse of technical assistance, highlighted that there was progress to be made in establishing a well-functioning framework for enabling political dialogue among the ministries.” Elsewhere, it observed that “weak coordination between ministries might act as a significant obstacle to the mainstreaming of climate change policies. In Indonesia, the low level of coordination between ministries...for instance, can be a significant impediment to the attainment of climate change targets. This lack of coordination is mainly due to poor governance in some ministries.”⁹¹

⁹¹ AFD/JICA, *Joint Evaluation of CCPL*, *op. cit.*, pp. 70, 82.

5.6 Thus, for a variety of reasons, the program as such had only moderate success with respect to the achievement of its ultimate objectives. This is reflected in the ICR's ratings for the program's policy subareas, a number of which were considered only moderately satisfactory. However, two of the policy subareas rated in the ICR (i.e., GHG measurement and monitoring and climate impact and vulnerability assessment) were not part of the original program design as presented in the PD for CC DPL-I. Thus, there were no up-front objectives, proposed policy actions, monitoring indicators, or expected results against which achievements or shortfalls could be measured. In addition, the ICR failed to rate – or even comment on – one area in the original policy matrix, energy pricing, in which progress during the implementation period of the DPL was limited.

5.7 The main difference between the self- and independent evaluations, however, is that the ICR rated each of the policy subareas and the overall operation, whereas IEG rates achievement in relation to the program's stated objectives and does not rate performance of each of the individual policy subareas, although it does gauge progress and results in relation to each objective on a four point scale – High, Substantial, Modest, and Negligible. In determining the overall outcome rating, moreover, IEG gives a heavier weight to efficacy than to relevance of objectives and design. Thus, even though in the present case, relevance of objectives is **High** and relevance of design is **Substantial**, as efficacy for both objectives is rated **Modest**, the overall outcome rating is **Moderately Unsatisfactory**.

Risk to Development Outcome

5.8 The ICR, which rated the risk to development outcome Moderate, highlighted three generic risks that were identified in relation to the Bank's Indonesia portfolio as a whole in the CPS for 2013-2015: coordination, governance/corruption, and external shocks. The first of these also adversely impacted implementation of some of the CC DPLs policy actions. The ICR concluded that “weak coordination and entrenched organizational behaviors may undermine capacity to develop and implement complex institutional reforms.” Elaborating on this, it added that high level government commitment to policy reform at the highest levels of government and in strategic, planning and budgeting documents remains strong, but the ability to deliver reforms across a wide agenda and multiple institutions continued to be weak and that “institutional rivalries undermine the capacity to craft and implement integrated policies across key sectors, including energy and land use.” It concluded that the challenge remained large and that future success would require action across legal mandates and economic interests from forestry, agriculture, mining, land use and local governments. It would also require “building sustainability concerns and incentives into rapidly growing and profitable economic sectors, in particular palm oil plantations.”⁹² Some of those interviewed by IEG in Jakarta suggested that this is starting to occur.

5.9 The statements above again point to the critical institutional and political economic challenges facing effective implementation of the GOI's climate change policies both within

⁹² World Bank, *ICR for CC DPL, op. cit.*, pp. 19-20. On a more optimistic note, however, it added that “on the positive side, key agencies and reformers now advocate moving toward a greener, more sustainable development path, beyond the core climate agenda of mitigation and adaptation. The next medium term development plan presents the opportunity to codify some key policies and programs for the longer term.”

the central administration and at the subnational level. While the policy framework has advanced since the CCPL ended, including with respect to adaptation with publication of the associated national action plan in late 2013, there has also been a change in presidential leadership as the result of the July elections and the administration that took office in October 2014. The new administration seems to be giving less priority to the climate change policies set by the previous one, although it has introduced significant institutional changes including establishment of the new Ministry of Environment and Forestry and dismantling of the REDD+ agency that had finally been created in the latter half of 2014. The effects of these changes as well as the extent to which the current administration will be better able to resist the strong economic and other pressures that appear to have limited results on the ground with respect to the reduction of GHG emissions in recent years, however, remain to be seen.

5.10 As also acknowledged in the ICR and elsewhere, the above cited institutional and political economy constraints, together with the often associated potential for corruption, have historically had an adverse effect on governance more generally in Indonesia. Here again the ICR points to the root of the problem by affirming that “entrenched economic interests have the motivation and capacity to resist needed reforms” and “addressing climate change mitigation and adaptation will require actions that touch on key economic sectors, as well as increased awareness and implementation capacity at the local level.” And it attempts to weigh both positive and negative elements in this regard: “on the positive side, there has been important progress on land use and forestry issues, particularly with the Government’s ‘One Map’ initiative and the recent two year extension of the moratorium on forest clearance licenses. On the other hand, local officials and elites still collude to produce changes on the ground, even where national laws and policies are sound.”

5.11 The ICR provides a concrete example to illustrate the latter problem, the “continued unwillingness to enforce bans on the use of fire for land clearing,” and it affirmed that “along with better coordination, the GOI will need better communication about the economic sustainability rationale for environmental and climate improvements, including the benefits and trade-offs for specific groups of stakeholders.”⁹³ CGD in its paper on the status of the Indonesia-Norway REDD+ Agreement also stressed the seriousness of the difficulties involved, observing that “Indonesia’s political and economic development continues to be hobbled by weak governance and uneven application of the rule of law.” It added that many government officials have colluded with private business interests to overlook environmental regulations when issuing permits or ignore violations and that concerns over “rampant corruption” in the national budget system led to the selection of UNDP as an initial channel for Norwegian funds under the Agreement as a way of addressing these fiduciary risks.⁹⁴

⁹³ *Ibid*, pg. 20. It also affirmed in this connection that “development partners are increasingly supporting...key ministries [particularly BAPPENAS and the Ministry of Finance] with integrated policy analysis, technical assistance and capacity development in this area.”

⁹⁴ Center for Global Development, *op. cit.*, pg. 6. It also stated (pp. 6-7) that “many laws and policies can create perverse incentives. For example, regulations governing oil palm plantations are designed to encourage exploitation by requiring the development of land designated for production within a given time period. Consequently, license holders who voluntarily set aside forest areas with high conservation or carbon value may end up seeing those areas reallocated to others who are more disposed to forest clearance and conversion.”

5.12 As CGD observes, future progress in curbing deforestation and land conversion for productive, including palm oil, activities -- and thus to cut GHG emissions from LULUCF sources -- will depend both on strong government leadership at the top and the building of a broader political coalition to support conservation activities, as well as on stronger commitment and greater institutional capacity to implement and enforce constructive policies and regulations. It also observes, however, that support for forest conservation has been limited to a “narrow base” of national and international NGOs, academics, and entrepreneurs anticipating the creation of a forest carbon market, and “does not extend to parties represented in Parliament or across the bureaucracy.”⁹⁵ According to this source also, the Ministry of Forestry, whose power was previously “formidable and largely unchallenged,” was “notorious for corrupt practices including issuing licenses and enforcement failures to benefit politically connected elites.”⁹⁶ Hopefully, the merger of this ministry with the former Ministry of Environment in early 2015 will lead these past practices to be curbed in the future, but the jury is still out.

5.13 The final generic risk to the development outcome of the CC DPL operation identified by the ICR concerned possible economic shocks to which Indonesia may continue to be vulnerable and which could threaten financing for climate change-related actions.⁹⁷ Climate finance in the country for 2008-2010 from both domestic and international⁹⁸ sources reached an estimated total of US\$ 951 million (in 2011 dollars) according to an independent report by the Climate Policy Institute, the Executive Summary of which was published in February 2014. Observing that this sum was composed of US\$ 627 million equivalent contributed through the Government’s budget, including resources initially received from international sources, and an additional US\$ 324 million from external sources, the report stated that this figure fell below GOI estimates of the level of financing required to meet its 2020 emission reduction targets. However, both domestic and international resources were expected to rise over the next few years “as comprehensive national policies on climate change mitigation (RAN-GRK) and adaptation (RAN-API) are fully implemented.”⁹⁹

5.14 The above considerations suggest that, even though positive steps have been taken on the policy front in Indonesia with respect to climate change, results on the ground are still largely incipient and, thus, the risk to the development outcome of the Bank’s CC DPL operation and the larger multi-donor CCPL program may be significant, at least in the short and medium term. This also appears to be the conclusion of the 2014 AFD/JICA joint

⁹⁵ *Ibid*, pg. 13.

⁹⁶ *Ibid*, pg. 9.

⁹⁷ World Bank, *ICR for CC DPL-I, op. cit.*, pg. 20.

⁹⁸ Most of these resources came from bilateral sources, with the multilateral development banks and international climate funds accounting for only around 10 percent of the total. Thus, the general budget support funds transferred through the CCPL are not included in the total.

⁹⁹ See Angela Falconer, Skye Glenday, Anja Rosenberg, and Jane Wilkinson, *Landscape of Public Climate Finance in Indonesia*, Climate Policy Institute, July 2014, pg. 2. This report also found that nearly 75 percent of domestic climate finance was for “essential ‘indirect’ activities, such as policy development, research and development, establishment of measuring, reporting, and verification systems and other enabling environments...[which would] drive the future scale up and effective allocation of finance by laying the foundation for ‘direct’ mitigation projects.”

evaluation, which stated that “the outcomes and impacts of the climate change policies are still to be seen. They are likely to come with a long time lag. In the short run, the results are mixed in the sense that, overall, GHG emissions continued to increase, but there is no data allowing us to make a judgement regarding their evolution relative to the BaU (Business as Usual) scenario. Furthermore, we also note that the GOI did not succeed in eliminating electricity subsidies immediately, but progress was made with regards to the CCPL target, namely the finalization of the roadmap for subsidy reduction.”¹⁰⁰ Finally, it affirmed that “the fact that the GOI did not want to continue the CCPL as expected is troubling. Even more troubling is the asymmetry: the GOI decided rather suddenly to stop. At the same time, a growing number of Donors were ready to participate (JICA, AFD, then WB and finally ADB).” It went on to observe that “this raises the question of how a CCPL should be managed, taking into consideration the evolving context, such as decreases in interest rates, the availability of foreign financing, the presence (or absence) of pressure exerted by international negotiations on climate change, the degree of influence of high-ranking Government officials opposed to the CCPL, etc.”¹⁰¹

5.15 Ultimately, the risk to achievement of the CC DPL’s development objectives will depend on: (i) the results of the ongoing international negotiations leading up to and the corresponding results of COP 21 for the UNFCCC to be held in Paris in December 2015; and, more importantly, (ii) how Indonesia responds to them. This will be the case both with respect to its efforts to move to a lower carbon and to a more climate-resilient development path. In this context, Indonesia submitted its Intended Nationally Determined Contribution (INDC) with respect to climate change on September 15, 2015. This document outlines the country’s proposed “transition to a low carbon future by describing the enhanced actions and the necessary enabling environment during the 2015-2019 period that will lay the foundation for more ambitious goals beyond 2020.”¹⁰² It essentially repeats prior Government commitments with regard to its GHG emissions targets (i.e., at least a 26 percent reduction in relation to BAU projections by 2020 and 29 percent by 2030, even in the absence of significant external funding) and adaptation challenges.¹⁰³

¹⁰⁰ The Borrower’s comments reproduced in the ICR, while indicating that the risk of project achievements not being maintained was “low” due to the “high visibility of climate change and sustainability outcomes in national development documents including the RAN-GRK,” also included the affirmation that energy subsidies “remain a highly politicized issue requiring champions throughout the executive and legislative branches of Government. Recently, there has been progress on this issue, with the Parliament approving a budget package (June 2013) to reduce fuel subsidies and provide cash handouts to cushion the impact on impoverished households.” World Bank, *ICR for CC DPL-I, op. cit.*, pg. 25.

¹⁰¹ AFD/JICA, *Joint Evaluation of the ICCPL, op. cit.*, pg. 113.

¹⁰² Republic of Indonesia, *Intended Nationally Determined Contribution*, submission to UNFCCC, Jakarta, September 15, 2015, pg. 1.

¹⁰³ *Ibid*, pg. 4. Interestingly, it also highlights that one of the “foundational principles” underlying future government action is adoption of “a landscape approach, recognizing that climate change adaptation and mitigation efforts are inherently multi-sectoral in nature” and affirming that “Indonesia takes an integrated landscape-scale approach covering terrestrial, coastal and marine ecosystems, implemented through capacity building of sub-national jurisdictions.” The Bank is currently actively helping the Government to develop this approach.

5.16 While some of the risks described above with respect to achievement of the program's declared objectives in terms of helping the Government to develop a lower carbon, more climate-resilient growth path are substantial, risks to the specific development outcomes of the prior actions recognized by the Bank for approval of CC DPL-I and for those indicative actions for the proposed second, third, and fourth loans that were achieved (even though the loans themselves never went forward), albeit in numerous cases only after considerable delays, are **Moderate**. Institutional advances over the past few years in areas such as river basin and natural disaster management and program-supported activities for geothermal energy, energy efficiency, and marine and coastal management seem likely to be sustained, although those with respect to REDD+, peatland management, and forest governance more generally are on much less solid ground, and continue to present major challenges for the Indonesian Government, as does achieving a significant "greening" of its energy matrix despite donor assistance, including that of the Bank.

Bank Performance

Quality at Entry

5.17 Prior to engaging in the CC DPL operation, the Bank had carried out relevant analytical work including a Country Environmental Analysis (CEA) that focused in part on climate change, and even before that, had collaborated in a multi-development partner study of issues and constraints in the Indonesian forestry sector. The CEA highlighted the need to give greater attention to adaptation and stressed the importance of reducing GHG emissions in both the land use and forestry and the energy sectors, priorities which were also clearly reflected in the CC DPL.¹⁰⁴ Through ESMAP, it had also helped the Government to undertake a low carbon development study. Together with other pertinent documents and studies elaborated by the Government and other development partners, they provided strong analytical underpinnings for the proposed programmatic series, which was initially derived from the GOI's 2007 National Action Plan for Addressing Climate Change. As noted above, the Bank's entry into the CCPL was an attempt to streamline and prioritize it to three pillars and eleven policy areas. The ICR acknowledged, however, that even after this, the program touched on many issues and sectors and involved many agencies, but argued that "this breadth reflected the climate change challenge in Indonesia, responded to the GOI's requests for inclusion, and created entry points with sectors and ministries seen to be important in the long run, such as agriculture." On the other hand, it also admitted that "this inclusive approach diluted the depth of analysis and dialogue that could be achieved and created monitoring challenges."¹⁰⁵

¹⁰⁴ See World Bank, *investing in a More Sustainable Indonesia: Country Environmental Analysis, op. cit.*, especially Chapters 6, 7, and 8, which addressed each of these priorities in turn.

¹⁰⁵ World Bank, *ICR for CC DPL-I, op. cit.*, pg. 21. It likewise observed that "several individual ministries expressed their strong desire that their programs be included in the CCDPL in order to be recognized in relation to the high visibility climate change issue," and that "in particular, the desire for balance between adaptation actions and mitigation actions led to inclusion of more sectors and more actions, some of which were less transformative."

5.18 The Bank’s decision to provide funding for the CCPL in its third year was based on its assessment of the availability of a meaningful entry-point into forestry and energy sector issues. But its late entry also created a need for “adjustments by the partners and GOI agencies in the selection and focus of policy actions [and] harmonization of the policy dialogue and interpretation of the results of the monitoring process were complicated by having more partners with different documentation requirements and approval processes.” These difficulties are reflected in the Borrower’s comments on Bank performance reproduced in the ICR, one of which was that “the Bank’s entry and choice of policy actions could have been better synchronized with the existing policy matrix agreed for the CCPL,” suggesting that the GOI may have felt that the Bank’s push for more substantial policy reforms was overly ambitious. Another pertinent Borrower observation was that “there were challenges in the coordination of monitoring and evaluation efforts, given the difficulty of measuring policy achievements or setbacks across two M&E frameworks.”¹⁰⁶

5.19 For these reasons, Bank performance in terms of quality at entry is rated ***Moderately Satisfactory***. In retrospect, despite the alleged “streamlining,” the program’s policy agenda, while laudable, was nonetheless too ambitious given the institutional and political economy constraints highlighted above, including with respect to the limited incentives for more effective participation by the line ministries and the difficulties of effectively implementing central government policies at the subnational level when local governments frequently had differing priorities and incentives. The first of these constraints was also identified in JICA’s comments on the draft ICR, specifically: “the line ministries lacked clear incentive to actively participate in the CCPL and its monitoring and evaluation process, despite their having made good contributions to technical meetings in the inter-ministerial discussions and provided data for the policy matrix.”¹⁰⁷

5.20 The AFD/JICA evaluation likewise included an important recommendation in this regard: “attention should be paid to the incentive structure for all entities involved in the policy dialogue (line ministries, local governments). Too much strain should be avoided when the action plans are implemented and the results monitored, reported, and verified. Tangible benefits for those entities should be considered, including the provision of additional capacity building and technical assistance.”¹⁰⁸ In addition, even though this would have been difficult to anticipate and many pertinent risks were identified in the PD, the risk that the programmatic series might fail to proceed after the first loan was disbursed was not considered at the time of appraisal, and the Bank could have more systematically assessed Government ownership of the program at the line ministry level, as well as within the Ministry of Finance and BAPPENAS.

¹⁰⁶ World Bank, *ICR for CC DPL-I*, *op. cit.*, pp. 21, 25.

¹⁰⁷ The ICR (pg. 26) also stated in this regard that “JICA flagged the need to examine the program loan incentive framework for line ministries as an important lesson from the process.”

¹⁰⁸ AFD/JICA, *Joint Evaluation of ICCPL*, *op. cit.*, pg. 119.

Quality of Supervision

5.21 The World Bank continued to participate in joint development partner-Government meetings through October 2012 in relation to implementation of the policy actions set out initially for the second phase of the CCPL even after the decision not to go forward with the second CC DPL was made. The ICR affirmed that supervision was “relatively continuous and involved regular meetings among the development partners and government counterparts [including] a few intensive joint missions [that] were scheduled around delegations visiting from the partners’ headquarters office...[and] regular workshops and technical discussions convened by BAPPENAS around specific technical or policy issues of high concern.” On the other hand, in rating Bank performance during supervision as Moderately Satisfactory, it also stated that “it would have been more effective for GOI officials to lead monitoring efforts with the line ministries/responsible agencies, rather than technical consultants [which]...would have provided more direct feedback from the policy actions (and challenges being faced) to the senior officials managing the CCDPL process on behalf of the GOI.”¹⁰⁹

5.22 The Bank held firm in insisting that the triggers established for presentation of the proposed second loan for the programmatic series to the Board be complied with as initially anticipated. Given the various reasons why the series did not go forward, it is difficult to imagine what more the Bank could have done to keep this set of operations alive. This notwithstanding, it continued to provide assistance to key elements of the Government’s climate change agenda, the aforementioned Geothermal Project being just one example, together with its engagement in the management of a number of pertinent key Trust Fund-supported activities, including the REDD+ readiness activities, the WACLIMAD technical assistance project, and ongoing loans in the area of disaster risk management.¹¹⁰ In addition to the various Carbon and Climate Investment Funds -- including the Forest Carbon Partnership Facility (FCPF)¹¹¹ and the Forest Investment Program (FIP)¹¹² as well as the CTF – since 2011 the Bank has also provided support to GOI to help develop market-based instruments for climate change mitigation through the Partnership for Market Readiness (PMR).¹¹³ Thus, despite the failure of the CC DPL series to go ahead, the Bank was assisting in parallel – and has continued to assist – GOI with key aspects of its climate change mitigation and adaptation agendas, both directly with its own resources and indirectly

¹⁰⁹ World Bank, *ICR for CC DPL-I, op. cit.*, pp. 21-22. Joint missions occurred at least once a year.

¹¹⁰ The Bank’s *FY 2013-15 Country Partnership for Indonesia, op. cit.*, pp. 38-41 describes a number of these activities and associated results, including pertinent activities by IFC.

¹¹¹ A FCPF grant to Indonesia for just under US\$ 3.2 million was signed in June 2011 having four components: (i) analytical work; (ii) support to the REDD readiness process; (iii) assessment and measurement of GHG impacts of land use change; and (iv) regional data collection and capacity building.

¹¹² The first joint mission to Indonesia by the World Bank, Asian Development Bank, and IFC took place in July 2011 and the second one in December of that year. Indonesia’s FIP Investment Plan, was endorsed on November 5, 2012.

¹¹³ Indonesia joined the Bank-administered PMR at the time of its organizational meeting in Bangkok in April 2011 and was awarded a US\$ 350,000 preparation grant at the first Partnership Assembly (PA) meeting in Barcelona one month later. A US\$ 3 million implementation grant was approved at the seventh PA in Marrakesh in October 2013. See Partnership for Market Readiness, *Annual Report April 2013-2014*, pp. 10, 13.

through its assistance with and/or administration of several innovative carbon and climate finance operations. As a consequence, Bank quality of supervision is rated *Satisfactory*.

Overall Bank Performance

5.23 Considering that Bank performance in terms of quality at entry is rated Moderately Satisfactory and that during supervision is rated Satisfactory, overall Bank performance is rated **Moderately Satisfactory**. The present assessment agrees in part with the ICR that “the CC DPL was strategically relevant and timely for the Government and the Bank” and that the Bank “ensured that the policy areas selected were supported by good analytical work and – together with development partners – helped to direct technical assistance to key areas as needed.”¹¹⁴ The proposed DPL series was, indeed, strategically relevant and it was supported by good analytical work and technical assistance, although much of the latter was financed by the other participating donors. However, in retrospect and for reasons that could not have been anticipated by the Bank in advance, its timing proved to be less fortunate. This resulted in the inability to achieve, or delays in meeting, the agreed triggers for the second loan, ultimately contributing to discontinuation of the programmatic series. While some of these risks were identified by the Bank at appraisal -- including coordination of GOI’s climate change national action plans and its commitment to policy reform actions over the medium run, together with “intermittent” progress with respect to forest management and energy pricing¹¹⁵ -- their likelihood and potential seriousness due to the institutional and political economy constraints discussed earlier were underestimated.

Borrower Performance

Government Performance

5.24 Government counterparts were reportedly closely involved in “defining the overall framework and adjusting the balance of actions across sectors, ensuring that it was not solely a mitigation program” and “Steering Committee meetings provided a venue for senior officials and development partners to review progress and performance on agreed policy indicators.”¹¹⁶ However, while commitment to the program’s objectives at the highest levels of national government was initially strong, changes in leadership in the Ministry of Finance and BAPPENAS soon after CC DPL-I was approved and coordination problems with less firmly committed line ministries and local governments adversely affected program implementation. According to the project team, once there was an unexpected change in Finance Ministers, the DPL series lost a key “champion” and the leverage associated with this position in terms of the ability to induce line ministries to undertake the tasks assigned to them in the policy matrix.

5.25 The ICR also observed that “the central agencies [i.e., the Ministry of Finance and BAPPENAS] steering the policy dialogue need[ed] to provide a more compelling rationale

¹¹⁴ World Bank, *ICR for CC DPL-I, op. cit.*, pg. 22.

¹¹⁵ World Bank, *CC DPL-I PD, op. cit.*, pg. 64.

¹¹⁶ World Bank, *ICR for CC DPL-I, op. cit.*, pg. 22.

and incentives for the participation of line ministries that [were] charged with delivering program results.” Three could also have been better integration and articulation of the link between GOI’s financing needs and the policy program.¹¹⁷ Ultimately, most importantly in this regard, for this and other reasons, the Government decided not to continue the DPL series following disbursement of the first loan, thereby making it impossible for the planned multi-loan operation to fully achieve its objectives and many of its expected results in a timely way. On balance, therefore, Government performance is rated ***Moderately Unsatisfactory***.

Implementing Agency Performance

5.26 Most of the participating agencies reportedly “valued the convening process of the DPL as an opportunity to share information across sectors and learn about what other agencies were doing about climate change issues.” But while some agencies looked toward the DPL process to “gain recognition and visibility for their programs” and financial and/or technical support from donors others “resisted the idea of being coordinated or giving something up (policy advance) for little in return (budget resources).” However, the ICR also acknowledged that, while initially and in key decision meetings, ownership and commitment were visible at higher levels of Government, particularly the Ministry of Finance and BAPPENAS, but later and in more routine monitoring meetings and workshops, participation was at a lower level. From this, it concludes that “large meetings of middle level officials were not an effective venue for addressing important cross cutting issues or bureaucratic/coordination challenges.”¹¹⁸ As a result, implementing agency performance is also rated ***Moderately Unsatisfactory***.

5.27 In addition to the above, some more general “structural” problems also adversely affected implementing agency performance for which the development partners themselves were at least partly responsible. According the AFD/JICA joint evaluation:

In some cases, the government officials in charge were not even aware that the policy actions for which they were responsible were included in the Policy Matrix, and thus, of their obligation to monitor and report progress/attainments to the steering committees. They were also confused and bothered by overlapping monitoring activities conducted by the various groups of development partners, including the CCPL’s requests for similar information. Such unnecessary burden and confusion could have been minimized with better coordination and communication among the Donors to pursue effective monitoring activities....The fact that the CCPL was carried out as a General Budget Support Program also created confusion among the line ministries: they did not receive the financial resources directly through the

¹¹⁷ *Ibid*, pp. 22-23. It added that “sometimes there were different signals from different quarters on the overall need for borrowing and the balance among partners. Clearer communication of intentions regarding the policy program relative to the need for borrowing would have been helpful, particularly regarding the preparation and later cancellation of the follow-on operations.”

¹¹⁸ *Ibid*, pg. 23. The ICR also stated in this regard that “although the aim of these meetings was to resolve difficult, cross-cutting, priority issues, some officials may have felt targeted in this setting to explain weak performance.”

scheme, and thus the benefit to them was less tangible compared to project assistance. It was natural for the line ministries to see the CCPL as a heavy burden, since they were repeatedly requested to provide information and to attend meetings.¹¹⁹

Overall Borrower Performance

5.28 On the basis of the observations above, overall Borrower performance is rated ***Moderately Unsatisfactory***. Despite a more positive rating and, while stating that “the CC DPL served as a platform for bringing together a wide range of agencies that need to work together to address Indonesia’s climate challenges,” the ICR itself is critical of the Government’s performance, observing that “the GOI could have done more on communicating the aims of the program and the role of the policy operation to the responsible agencies,” as well as with the development partners, about its changing priorities regarding the CCDPL series.¹²⁰ In short, while Borrower commitment may have initially been strong in the two key central ministries, in addition to the coordination difficulties cited above, program ownership was weaker and more uneven among the line agencies responsible for implementing many of the policy actions agreed with the development partners, while even that of the Ministry of Finance and BAPPENAS declined significantly over time, perhaps as the need for additional budget support also diminished as well as due to personnel changes in key leadership positions.

Monitoring and Evaluation

5.29 **Design.** As noted above, some indicators were not fully reflective of the policy objectives that they intended to represent, and so failed to provide evidence of a results chain from the supported policy reform to the desired objectives. Baseline surveys were not carried out for two indicators.

5.30 **Implementation.** As noted above, there were difficulties in collecting data from line ministries, particularly on policies that were still in development. In addition to the two indicators with no baseline, a third indicator was not used as the information source was discontinued.

5.31 **Utilization.** The monitoring information was used mainly to respond to reporting requirements related to the DPL and apparently not to guide implementation decisions.

5.32 Consequently, the Quality of Monitoring and Evaluation is rated **Modest**.

¹¹⁹ AFD/JICA, *Joint Evaluation of ICCPL*, *op. cit.*, pp. 69-70.

¹²⁰ World Bank, *ICR for CC DPL-I*, *op. cit.*, pg. 23.

6. Lessons

6.1 Two of the lessons identified by the ICR are particularly important and with which this assessment fully agrees. In addition, the present evaluation yields a number of other lessons, some of which also are of particular relevance for DPLs with environmental, including climate change, objectives. The first lesson drawn by the ICR was that “*champions are needed, but institutional engagement too.*”

6.2 The CC DPL experience clearly illustrates the importance of having both a strong “champion” and what can happen when, for whatever reasons, that person departs the scene and other leaders with less understanding of and/or commitment to the program’s policy objectives take command of key ministries or agencies. It also reveals *the importance of obtaining strong and consistent institutional buy-in from the other ministries and agencies involved*. The persisting nature of this challenge in Indonesia was stressed by government officials as securing the proactive commitment and participation of line ministries in the implementation of policy reforms included in DPLs continues to be a constraint. Also relevant was the persisting difficulty of bringing other key government entities on board in terms of climate change versus economic growth priorities more specifically. In short, *both strong leadership and cross-the-board commitment to implementation of the specific actions contained in DPLs is essential for them to be fully successful in terms of their policy objectives*, and this proved not to be the case in the present instance.

6.3 A related lesson, which is particularly relevant for DPLs with environmental, including climate change, objectives which are inherently multi- or cross-sectoral in nature is that *obtaining sufficient institutional buy-in becomes even more difficult when more than one sector is involved*. This is especially the case when there are limited incentives for this to occur within the line ministries involved, as in most cases they receive no additional budgetary resources in order to carry out their assigned policy implementation tasks and where the tasks involved may not be very high, if present at all, among their own institutional or sectoral priorities.

6.4 The more general lesson that can be derived from the observation immediately above is *the need to be fully aware of the incentives (or lack thereof) for policy action implementation among the various government agencies and levels of government involved in a DPL*. In a country like Indonesia where subnational governments have considerable autonomy and often go against specific central government policies and regulations with which they disagree by failing to implement or enforce them, this is a potentially significant constraint on the effectiveness of DPLs that require concrete actions, such as those associated with improved forest management and governance or prohibiting the use of fire for land clearing purposes, on the ground.

6.5 It also leads to another related lesson, *the need to fully understand the political economy, as well as the institutional constraints, that are likely to affect the incentives perceived by different ministries and levels of government*. Again, the present experience illustrates the importance of this lesson both with respect to the underlying political and economic factors that are driving deforestation, peatland clearance, and the use of GHG-

emitting fires in large parts of Indonesia (particularly Kalimantan and Sumatra), as well as the reluctance – and associated delays – in the reduction of energy subsidies, despite its considerable potential benefits both in fiscal and environmental terms. The impediments experienced to date in terms of effectively getting REDD+ off the ground in Indonesia despite the attractive prospect of obtaining access to US\$ 1 billion in grants from the Norwegian Government for this purpose illustrates the difficulty of overcoming these constraints and also affected implementation of the REDD-related actions of the CC DPL.¹²¹

6.6 *Understanding the political economy and institutional constraints is particularly important in order to determine how realistically implementable proposed DPL triggers and other indicative actions are likely to be.* This implies the need for comprehensive country knowledge and a broad and thorough risk analysis during appraisal. In the present case, some of the risks were recognized but, in practice, underestimated, while others (e.g., some of the broader political economy ones mentioned above and the change in key program supporters on the government side) were not identified in the Program Document. While not all risks can be anticipated, those associated with traditional institutional coordination and ownership problems, decentralization, and policy implementation constraints on the ground due to political and/or economic interests that are likely to oppose and effectively block such measures, can – and should – be identified and assessed as realistically as possible as part of the appraisal process. Failure to do so can result in overly optimistic or ambitious triggers and policy actions as was clearly the case with the CC DPL series.

6.7 In short, another key lesson from this experience is that ***the Bank needs to be realistic in defining its policy objectives and targets for Climate Change (and other) DPLs.*** The Bank was initially reluctant to financially support the JICA-ADF-led policy based operation for climate change in Indonesia, but decided to come in after the Government agreed to stronger policy measures regarding energy subsidies and forest governance. However, these measures subsequently proved difficult to implement within the time frame expected to allow the operation to proceed beyond the first loan, and, thus, in practice, were too ambitious in light of the institutional and political economy constraints mentioned above. Similarly, the assessment of program performance revealed that actions taken in some policy subareas were considerably more successful than others. Progress across sectors was uneven, but was generally better in those areas such as renewable (i.e., geothermal) energy, water resource management, and disaster risk management in which the Bank was already providing support through other instruments and which were less politically contentious. In other areas, such as energy pricing, forest governance, and the provision of a financial mechanism/incentives to induce better performance on the part of local governments, it was much weaker, again due

¹²¹ Similarly, Indonesia's strong continued reliance on fossil fuels, both for domestic energy consumption and, in the case of coal, for export purposes, means that the likelihood that it can and will significantly shift to renewables, including geothermal energy, in the foreseeable future remains very limited. Energy efficiency improvements notwithstanding, the implications of all of the above elements in terms of generating a substantial decline in GHG emissions in Indonesia are not favorable. In fact, together with deforestation, urbanization, and domestic fossil fuel consumption, such emissions appear to have increased since 2010 and are likely to continue to do so in the years ahead despite GOI efforts including with World Bank and other development partner support to reduce them.

to the contextual impediments experienced and which the Bank appears to have underestimated.

6.8 A second and more positive lesson emphasized by the ICR that also merits further elaboration is that ***“policy based operations provide an important convening instrument.”*** DPLs – particularly programmatic ones – indeed have ***considerable potential value as a convening instrument***, and this is especially the case when key Finance and/or Planning Ministries take the lead in this regard (although this strong commitment to the operation needs to continue throughout the anticipated implementation period). As in the present case, ***they can also play a key role in helping to better coordinate and/or harmonize support from different development partners around a set of common objectives and agreed policy actions***. Bank staff affirmed that the joint government-development partner monitoring and planning meetings were particularly useful and this was also observed in the ADF/JICA joint evaluation. However, once the series was suspended, donor coordination appears to have broken down and contacts among them have been less frequent and systematic since that time, at least as concerns helping the country to address climate change, even though this objective remains an institutional priority for most, if not all, of them in their current assistance to Indonesia.

6.9 This loss of convening power and associated policy dialogue both with key government ministries and other development partners points to yet another lesson that can be drawn from the CC DPL experience: ***the need for DPLs to be part of a broader engagement strategy with respect to a particular policy reform area involving multiple Bank instruments, including investment loans and technical assistance***. Bank staff stressed the importance of “twinning” DPLs with investment loans to ensure greater likelihood of their effectiveness. In this context, the existence or prospect of Bank investment loans may serve as a positive incentive for ministries or agencies charged with implementing parts of a DPL. This appears to have been the case in the renewable energy (i.e., geothermal energy) and disaster risk management areas of the CC DPL, which recorded some of the more successful policy actions in this DPL and are areas in which the Bank was providing (DRM) or expected to provide (geothermal) financing for investment projects at the time the series was initiated. In contrast, the Bank had a more checkered past history in terms of lending in the forest sector and with the Forest Ministry even though it had undertaken considerable past analytical work on forest sustainability-related issues, both individually and with other development partners, including ADB, DFID, CIFOR, and ICRAF. The powerful competing economic and political interests in the forest sector, as opposed to the relative absence of them in the renewable energy sector, explain much of the differences in performance in this regard.

6.10 ***A multi-instrument Bank engagement strategy around a specific emerging development challenge, such as helping a government to address climate change, also needs to have both a longer-term engagement and support institutional capacity building, neither of which can be effectively incorporated in DPLs, even programmatic ones, whose financial objectives are inherently short term.*** Bank staff stressed the importance of establishing long-term relationships with the “bureaucracy” and the need for capacity building as critical requirements for the effectiveness of Bank-supported development interventions generally, pointing out that DPLs are not the right instrument to achieve such objectives and should not

be expected to do so, especially in the case of Indonesia with which he was very familiar. In short, *the limitations as well as the advantages – primarily in financial terms (i.e. fast-disbursing general budget support, particularly in times of economic and/or fiscal crisis) but also secondarily on the policy front – of development policy finance operations need to be clearly understood and the instrument used appropriately and accordingly.*

6.11 An additional lesson that can be drawn from the CC DPL experience is that *multi-year programmatic DPLs are subject to many of the same risks and uncertainties as investment loans*, even though they may have shorter implementation periods, as delays in carrying out policy actions can occur and government commitment can change dramatically over time. In the present case, numerous policy actions, including one of the key triggers for the second loan were delayed, and some still have not been implemented. In short, while programmatic DPLs, if implemented, have several clear advantages including a continuing “seat at the table” for the Bank in terms of policy dialogue in a particular area and the prospect of helping and/or inducing governments to move forward on a policy agenda of interest to the Bank, they are also subject to some of the same kinds of implementation problems, including unexpected external “shocks,” as other types of financing instruments.

6.12 Finally, *even in cases, such as the present one, in which a DPL is unsuccessful (for whatever reason or combination of reasons) in terms of its specific policy objectives, it can nevertheless play a positive and strategically important role in terms of establishing, continuing, and/or advancing the Bank’s policy dialogue with and assistance to a Borrower in a given area, such as climate change, that can be manifested in the increasing use of other Bank instruments, including investment loans and TA, over time.* Various past and present Bank managers and operational staff who have worked, or are working on, Indonesia have highlighted the importance of the CC DPL in particular in terms of strengthening the Bank’s dialogue with the Ministry of Finance, BAPPENAS, and several line ministries in relation to climate change, which has led to numerous other engagements in this area both on the mitigation and adaptation sides over the past five years. Those interviewed during the evaluation mission in the Ministry of Finance and BAPPENAS, as well as former high officials of the Ministry of Forestry and the Secretariat for the National Council on Climate Change, made essentially the same point when asked to identify the principal benefit of the CC DPL for the country. Thus, while the CC DPL operation is rated Moderately Unsatisfactory, the Bank’s collaboration with the GOI in numerous areas related to climate change has blossomed in recent years and may be even more promising in the future. In good measure, this is an outcome of the relationships and policy dialogue established in association with this incomplete programmatic DPL series.

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Annex A. Basic Data Sheet

INDONESIA CLIMATE CHANGE DEVELOPMENT POLICY LOAN (IBRD-71950)

Key Project Data (amounts in US\$ million)

	Appraisal estimate	Actual or current estimate	Actual as % of appraisal estimate
Total project costs	800.00	800.00	100.00
Loan amount	200.00	200.00	100.00
Cofinancing	600.00	600.00	100.00
Cancellation	-	-	-

Cumulative Estimated and Actual Disbursements

	<i>FY10</i>
Appraisal estimate (US\$M)	200
Actual (US\$M)	200
Actual as % of appraisal	100%
Date of final disbursement: June 30 2010	

Project Dates

	Original	Actual
Initiating memorandum	12/15/2009	03/24/2010
Negotiations	05/05/2010	05/05/2010
Board approval	05/25/2010	05/25/2010
Signing		06/23/2010
Effectiveness		09/07/2010
Closing date		12/31/2010

Staff Time and Cost

P120313 – Climate Change Development Policy Loan		
	Staff Time and Cost (Bank Budget Only)	
	No. of staff weeks	USD Thousands (including travel and consultant costs)
FY10	59.57	227,193.76
Total:	59.57	227,193.76

Task Team Members

Name	Title	Unit	Responsibility/Specialty
P120313 Climate Change Development Policy Loan			
Ahmad, Mubariq	Sr. Environmental Specialist	EASIS	Sr. Environment Specialist
Ahmed, Kulsum	Lead Environmental Specialist	ENV	Lead Environmental Specialist
Amsberg, Joachim Von	Country Director (2010)	EACIF	Country Director (2010)
Brown, Timothy H.	Sr. Environmental Specialist / Task Team Leader	EASIS	Sr. Environmental Specialist / TTL
Danuwidjojo, Marleyne	Team Assistant	EASIS	Team Assistant
Dharmajaya, R. Cynthia	Program Assistant	EASIS	Program Assistant
Djaky, Jeannine	Sr. Program Assistant	ENV	Sr. Program Assistant
Feinstein, Charles M.	Sector Manager	EASSD	Sector Manager
Gunawan, Iwan	Sr. Disaster Risk Management Specialist	EASIS	Sr. Disaster Risk Management Specialist
Hamman, Sonia	Sector Manager (2010)	EASSD	Sector Manager (2010)
Hanny, Fnu	Program Assistant	EASIS	Program Assistant
Heister, Johannes	Sr. Environmental Specialist	EASER	Sr. Environmental Specialist
Jayawardena, Migara	Sr. Infrastructure Specialist	EASID	Sr. Infrastructure Specialist
Jurgens, Emile	Consultant	EASIS	Consultant
Leitmann, Josef Lloyd	Lead Environmental Specialist	EASSD	Lead Environmental Specialist
Lemaistre, Paul	Consultant	EASIS	Consultant
Ostojic, Dejan R.	Lead Energy Specialist	EASID	Lead Energy Specialist
Prabowo, Guntur Cahyo	Consultant	EASIS	Consultant
Sasmitawidjaja, Virza S.	Consultant	EASIS	Consultant
Seppala, Juha Antti Kalevi	Jr. Professional Officer	EASIS	Jr. Professional Officer
Shetty, Shobha	Sr. Economist	EASSD	Sr. Economist
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Van Hofwegen, Paulus	Sr. Water Resources Specialist	EASID	Sr. Water Resources Specialist
Wang, Xiaodong	Sr. Energy Specialist	EASSD	Sr. Energy Specialist

Annex B1. Data tables

Annex Table 1. Objectives and Prior Actions for Mitigation by Area and Subareas

Area/Subarea	Objective	Prior Action
Land Use Change and Forestry Sector Mitigation		
Peatland Conservation		
	Improved policy coordination and management of peat land.	Issued and began implementation of a master plan on peat land rehabilitation in Central Kalimantan -- Ministry of Forestry (MOFR) Regulation No. 33/2008.
Reduced Emissions from Deforestation and Degradation (REDD)		
	Improve regulatory framework for REDD implementation and develop demonstration activities.	Launched National Readiness Program for REDD (September 2008) and established legal framework through MOFR Regulations No. 68/2008 on Demonstration Activities and No. 36/2009 on Commercial Carbon Forest Products; Initiated a REDD program with UN REDD support in October 2009 and Completed Participation Agreement with Forest Carbon Partnership Facility (FCPF) in November 2009.
Forest Management and Governance		
	Improve basis for timber legality, strengthen institutions, and improve incentives for regional governments to address forest loss and degradation.	Issued MOFR Regulation No. 38/2009 on Timber Legality Verification System to establish a national timber legality standard and a system for monitoring and verification to assist in reducing illegal logging and forest loss and degradation.
Energy Sector Mitigation		
Renewable Energy Development		
	Improve policy framework to promote renewable energy development and investment.	Issued Presidential Decree No 4/2010 which assigns to the State Electricity Company (PLN) the acceleration of power plant development using renewable energy, coal and gas and mandates PLN to develop and purchase power from renewable energy sources;. Issued Ministry of Energy and Mineral Resources (MEMR) Regulation No. 32/2009 on Purchase Standard Price of Electricity Power by PLN from Geothermal Electricity Power Station (December 2009); Issued MEMR Regulation No. 31/2009 on purchase price of electricity from renewable energy (November 2009) and Ministry of Finance (MOF) Regulation No. 24/2010 on tax incentives for renewable energy development (January 2010).
Energy Efficiency		
	Improve policy framework to promote energy efficiency development and investment.	Issued Government Regulation No. 70/2009 on Energy Conservation (December 2009). MEMR developed and implemented national system of energy audits for major firms in key sectors.
Energy Pricing		

	Improve incentives for energy production and use.	Non-exclusive indicator that also refers to reforms under Infrastructure DPL 3, approved September 2009.
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Annex Table 2. Objectives and Prior Actions for Adaptation and Disaster Preparedness by Subarea.

Subarea	Objective	Prior Action
Water Resources Sector		
	Establish strategic water management plans in key river basins.	Issued Presidential Regulation No. 12/2008 on Water Resource Councils. The National Water Resource Council (NWRC) has been established and met several times. Prepared integrated water resource management plans (POLA) with climate change assessment in national strategic water basins in Java.
Agriculture Sector		
	Scale up actions to improve climate resilience in agriculture.	Develop an irrigation asset management system. Implemented System for Rice Intensification (SRI) practice in target provinces. Implemented Climate Field School Program in target provinces.
Disaster Risk Management		
	Scale up actions to establish national disaster risk reduction (DRR) and management system.	Enacted Law No. 24/2007 on Disaster Management and issued Presidential Regulation No. 8/2008 establishing a National Disaster Management Agency (BNPB). Finalized the National Action Plan for DRR (NAP-DRR 2010-12) in 2009 and formally launched it in February 2010. GOI incorporated mainstreaming of DRR into Medium Term Development Plan (RPJMN) in January 2009.
Marine and Fisheries Sector		
	Establish systems and strategies to improve climate preparedness and resilience in the coastal and marine sector.	GOI launched the National Plan of Action (NPOA) for the Coral Triangle Initiative (CTI) on coral reefs, fisheries and food in May 2009. GOI approved a roadmap of CTI actions for 2010-11 in November 2009.

Annex Table 3. Objectives and Prior Actions for Cross Sectoral and Institutional Issues by Subarea.

Subarea	Objective	Prior Action
Mainstreaming Climate Change in the National Development Program		
	Strengthen knowledge base and legal basis for climate change action and link these to national budgeting and planning process.	GOI finalized the <i>Second National Communication to UNFCCC</i> , It submitted mitigation actions and commitments under Copenhagen Accord (January 2010), updated <i>Development Planning Response to Climate Change</i> in March 2010, and finalized the <i>Indonesia Climate Change Sectoral Roadmap (ICCSR)</i> in March 2010.
Policy Coordination and Financing Scheme for Climate Change		
	Strengthen policy coordination and develop financing mechanisms for addressing climate change.	GOI issued the National Action Plan for Addressing Climate Change (November 2007), established a National Council on Climate Change by Presidential Decree No. 46/2008 (July 2008) and launched the Indonesia Climate Change Trust Fund (October 2009).

Annex Table 4. Indicative Actions and Expected Results for Land Use Change and Forestry Mitigation for CC DPLs II, III, and IV by Subarea (Triggers for CC DPL-II in **bold**).

Subarea	Indicative Actions for 2010	Indicative Actions for 2011-12	Expected Results
Peatland Conservation			
	<p>Coordinate among ministries to control peatland emissions, implemented under the framework of presidential regulation.</p> <p>Implement key steps in multi-sector policy dialogue toward establishing a legal framework for the National Strategy for lowlands with the focus on balancing development and conservation, considering peatlands as a major source of GHG emissions.</p>	<p>2011: Issue a presidential regulation which indicates special measures for peatland conservation and peatland water management to minimize carbon emissions.</p> <p>2012: Implement actions based on presidential to improve management of peatlands.</p>	<p>The institutional and legal framework to conserve and restore peatland is improved, thus reducing conflicting policies and improving coordination. In the medium term, this will help to reduce a major source of GHG emissions.</p>
Reduced Emissions from Deforestation and Degradation (REDD)			
	<p>Complete the Ministerial Decree on Mechanism and Procedures of REDD by defining roles and responsibilities of government agencies, local communities, and the private sector in managing carbon assets.</p> <p>Conduct/implement at least 3 REDD demonstration activities and report results in specific locations and with specific partners.</p>	<p>2011: Establish a national registry of REDD to track implementation of REDD activities and payments in a national carbon registry.</p> <p>2012: Assess and develop framework for forest fiscal management, including incentives for regional stakeholders.</p>	<p>Rules for REDD activities will be clarified, allowing greater development and investment in demonstration activities, with equitable sharing of benefits. In the medium term, this will contribute to reducing emissions from deforestation and forest degradation.</p>
Forest Management and Governance			
	<p>Implement and monitor performance of GOI regulation on timber legality and assess capacity for oversight, certification and monitoring in national standards agency.</p> <p>Design inter-governmental transfer mechanism to finance and improve the incentives for local governments to strengthen forest management activities toward emissions reductions.</p>	<p>2011: Strengthen implementation of regulatory framework to enhance ongoing implementation of GOI regulation on timber legality by monitoring and evaluation.</p> <p>2011: Formalize inter-governmental transfer mechanism for local government forest management activities.</p> <p>2012: Evaluate and improve inter-govt.</p>	<p>Forest governance and management are improved through clearer institutional means to address timber legality and improved incentives for local governments. In the medium term, this will help to reduce the deforestation rate and improve the potential for REDD success.</p>

		transfer mechanism to finance local government forest activities.	
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Annex Table 5. Indicative Actions and Expected Results for Energy Sector Mitigation for CC DPLs II, III, and IV by Subarea (Trigger for CC DPL-II in **bold**).

Subarea	Indicative Actions for 2010	Indicative Actions for 2011-12	Expected Results
Renewable Energy Development			
	<p>Improve policy framework for promoting geothermal development to facilitate arrangements/deals between developer and off-taker.</p> <p>Issue draft regulation to clarify the scheme of compensation for the incremental cost of geothermal electricity to off-taker.</p>	<p>2011: Continue to improve policy framework to promote geothermal development and to provide exploration fund to mitigate upstream risk for eastern Indonesia.</p> <p>2011: Review the impact of MEMR Regulation No. 31/2009 and propose new or revised regulation to promote renewable energy development further and more effectively and draft (2011) then issue (2012) a regulation on improved framework for renewable energy development.</p>	<p>Improved and stable regulatory framework for renewable energy development, with appropriate risk and benefit sharing, will contribute to development of new geothermal projects and other renewable energy investments. In the medium term, this will improve energy security and reduce GHG emissions from electricity generation.</p>
Energy Efficiency			
	<p>Prepare and master plan for energy conservation including energy efficiency standards, energy audit program with a monitoring and evaluation (M&E) framework, fiscal incentives options, and industrial energy conservation.</p>	<p>2011: Implement the master plan of energy conservation (including energy efficiency standards, energy audit program with an M&E framework, fiscal incentives options, and industry energy conservation).</p>	<p>Improved rules and incentives will encourage industries and manufacturers to undertake energy efficiency investments. In the medium term GHG emissions will be reduced through enhanced energy efficiency, focusing on energy intensive sectors.</p>
Energy Pricing			
	<p>Finalize a road map for improving subsidy policy of electricity.</p>	<p>2011: Implement actions based on the road map, including regulations.</p>	<p>Prices will begin to reflect economic and environmental costs. In medium term, this will provide incentives for energy conservation and development of alternative energy sources, contributing to GHG reductions.</p>

Annex Table 6. Indicative Actions and Expected Results for Adaptation and Disaster Risk Preparedness for CC DPLs II, III, and IV by Subarea.

Subarea	Indicative Actions for 2010	Indicative Actions for 2011-12	Expected Results
Water Resources Sector			
	<p>Continue strategic assessment of the water future of Java (prepare an action plan for priority interventions incorporating climate change, urbanization, economic development, and food security as integral part of River Basin Strategic Water Management Plans and framework for River Basin Master Plans).</p> <p>Nationally, complete 12 provincial water resource councils 12 Coordination Teams for WRM in River Basins (TKPSDA), and 8 Integrated Water Resource Management Plans (POLAs).</p>	<p>2011: Complete master plans for the Java River Basins which include climate change adaptation measures, by enacting ministerial decree.</p>	<p>Water resource management will be improved through development of integrated plans and establishment of responsible institutions. In medium term, contributes to ability to anticipate and respond to water-related climate risks (droughts and floods) and to resilience at the region/river basin level.</p>
Agriculture Sector			
	<p>Evaluate performance, then approve and scale up actions for adaptation in agriculture including climate field school, SRI, and to enforce land development and management without burning as part of an overall plan (based on Ministry of Agriculture – MOA – Decree No. 26/2007).</p>	<p>2011: Continue the 2010 progress to improve and scale up actions for adaptation in agriculture including climate field school, SRI, and to enforce land development and management without burning.</p>	<p>Farmers better prepared for climate change impacts, with better sources and channels of information. In medium term, will strengthen resilience for climate change impacts on food production (floods, droughts, pests) at the community/farm level.</p>
Disaster Risk Management			
	<p>Continue efforts to establish Local Disaster Management Agency (BPBDs) in all provinces.</p>	<p>2011: Implement DRR program activities according to National Action Plan for DRR.</p> <p>2012: Implement comprehensive risk financing framework combining mechanisms, including reserve (on-call) budget, stand-by financing, and weather derivatives.</p>	<p>Institutional framework, capacity and resources will be improved for DRR and management. Climate change adaptation issues (vulnerability, preparedness) will be mainstreamed into policy, budgeting and implementation for DRR and management.</p>
Marine and Fisheries Sector			

	<p>Finalize plans and budgets for inception of the 5-year implementation of the Indonesian Global Ocean Observing System (INAGOOS), an ocean monitoring program that provides data about ocean and atmosphere interaction.</p> <p>Develop a strategy for coastal community resilience to cope with climate change, including a plan for climate resilient villages in 8 vulnerable districts on the north coast of Java, and implement a study on coastal vulnerability in relation to sea level rise in Java and Bali.</p>	<p>2011-2012: Continue implementation of INAGOOS to provide information for marine adaptation plans.</p> <p>2011-2012: Implement the strategy for coastal community resilience to cope with climate change.</p>	<p>Coastal and marine climate monitoring capacity will be improved. Local community resilience will be improved and provide a model for replication in other vulnerable areas. In the medium term, strengthening the institutional and local capacity for resilience and improved management in coastal areas will contribute to climate resilience.</p>
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Annex Table 7. Indicative Actions and Expected Results for Cross Sectoral and Institutional Issues for CC DPLs II, III, and IV by Subarea. (Trigger for CC DPL-II in **bold**)

Subarea	Indicative Actions for 2010	Indicative Actions for 2011-12	Expected Results
Mainstreaming Climate Change in the National Development Program			
	<p>Issue a presidential decree on National Action Plan for voluntary 26 percent GHG emission reduction.</p>	<p>2011: Draft provincial action plan for contributing to 26% emission reduction objective.</p> <p>2011: Prepare Nationally Appropriate Mitigation Action (NAMA) in accordance with Mid Term Development Plan (PRJM) and ICCSR.</p> <p>2012: Incorporate climate change program into regional mid-term development plans (RPJMD) at Kabupaten level.</p>	<p>Strengthened knowledge base, institutional framework, and legal basis for implementation of both mitigation and adaptation programs. This will contribute to achievement of national climate change objectives in the medium term.</p>
Policy Coordination and Financing Scheme for Climate Change			
	<p>Implement an innovative funding mechanism for climate change through the Indonesian Climate Change Trust Fund (ICCTF).</p> <p>Design inter-governmental fiscal transfer mechanism to provide incentives for local government to take priority climate change actions.</p>	<p>2011: Continue to implement and support climate change projects under the ICCTF.</p> <p>2012: Finalize climate change inter-governmental transfer/incentives mechanism for local government.</p>	<p>Institutional mechanisms for coordination of climate policy formation, budget allocation, and implementation will be improved. The legal and institutional framework for financing for climate change action will be improved. In the medium term, local governments will face more positive incentives to take appropriate climate change actions and fewer disincentives or policy distortions.</p>

Annex Table 8. Results Framework for CC DPL-I by Priority Action Area, 2010 Target and 2009 Baseline.

Priority Area	Monitoring Indicator	Target (2010)	Baseline (2009/2010)
Improve policy coordination and management of peatland	Incidence of hotspots/clearing of peat lands	10% reduced from baseline	Measured hotspots 2009: Indonesia: 73,800 Riau: 10,448
Improve regulatory framework for REDD implementation and develop demonstration activities	Number of demonstration pilots in REDD projects	8 REDD Demo Sites	4 REDD Demo sites
Improve basis for timber legality, strengthen institutions, and improve incentives for regional governments to address forest loss and degradation	Number of forest crime cases brought to court	10% improvement in cases brought over 2007-2009 average	Illegal logging cases: 2007= 278; 2008 = 171; 2009 = 69 Encroachment cases: 2007 = 79; 2008 = 45; 2009 = 25
Improve policy framework to promote renewable energy investment and development	MW of capacity under construction	40% increase over baseline	2009: 1065 MW installed
Improve policy framework to promote energy efficiency development and investment	Energy efficiency ratios	Energy efficiency improved by 5% in at least one key industrial sector	Steel: Electric Arc Furnace: 700 kWh/t Ceramics: 16.6 GJ/t Tires: 8100 kcal/kg Cement: 800 kcal/kg clinker Glass: 12.4 GJ/ton
Establish strategic water management plans in key river basins	Number of water management plans established	2012: 12 Plans	2009: 3 Plans 2010: 5 Plans
Scale up actions to improve climate resilience in agriculture	Percentage of farmers surveyed that show understanding and practicing of adaptation techniques	20% increase over baseline in targeted Kabupaten	2010: baseline will be established through survey
Scale up actions to establish national disaster risk reduction and management system	Number of provinces with local disaster management agencies	2012: 33 provincial agencies; 40 district level agencies	2009: 5 provincial agencies; 20 district level agencies
Establish systems and strategies to improve climate preparedness and resilience in the coastal and marine sector	Percentage of coastal communities that show greater awareness and changed practices relative to baseline in target locations	10% increase over baseline in 8 districts on north coast of Java	2010: baseline will be established through survey
Strengthen knowledge base and legal basis for climate change action and link these to national budgeting and planning processes	Increased financing for GOI actions related to the 26% emissions reduction plan	10 Trillion Rupiah for Ministerial proposed projects (cumulative)	1.736 Trillion Rupiah allocated for 2009

Strengthen policy coordination and develop financing mechanisms for addressing climate change	Funding for climate change projects through ICCTF	9 million pounds (UK) pledged; 10% disbursed	0 funding through ICCTF in 2009
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Annex B2. Analysis of Environmental and Social Effects

The Program Document acknowledges that, while the CC DPL series was designed to help Indonesia reduce deforestation and forest degradation, promote renewable energy, and support better coordination among government institutions engaged in climate change planning, budgeting, and implementation, there were also some areas where environmental, social, and poverty issues could arise, mainly in relation to activities related to REDD+ and peatlands and indirectly through pricing reform for geothermal electricity. With respect to the first two, it noted that the REDD framework being developed in Indonesia would ultimately need to develop mechanisms to avoid or mitigate negative environmental impacts and that for peat land rehabilitation and conservation in Central Kalimantan, the approaches needed to be carefully designed, applied according to best practice, and adapted to local and regional circumstances. The possibility that low income groups would not benefit from climate finance mechanisms was also recognized in the PD as a potential social risk.¹²²

In the case of geothermal investments, the PD observed that individual power plants would need environmental impact assessments and mitigation plans. It also stated that local government capacity for implementation continued to be weak, but could be “improved and assisted for large investments, such as power plants.”¹²³ Presumably, the subsequent Bank/CTF Geothermal Energy Project was designed in part to help mitigate this risk for the specific investments supported by it.

An annex in the PD was dedicated to the topic of environmental assessment, which, *inter alia*, identified the documents consulted as part of a “quick analysis” of the likelihood of significant environmental effects of the program. These included the 2004 good practice note on environmental and natural resource aspects of DPLs, the 2008 Bank toolkit entitled *Assessing the Environmental, Forest and Other Natural Resource Aspects of Development Policy Lending*, and a document entitled *Policy and Institutional Reform to Support Climate Change Adaptation and Mitigation in Development Programs*. For Indonesia specifically, they also included the aforementioned CEA (2009) and the report concerning strategic options in the forestry sector (2006), as well as a Ministry of Finance “green paper” entitled *Economic and Fiscal Policy Strategies for Climate Change Mitigation in Indonesia*, also issued in 2009.

This annex generically considered the environmental impacts associated with each of the CC DPLs’ three major policy areas. In the case of mitigation, it observed that policy measures to reduce deforestation and degradation through REDD and to improve peatland management and forest governance “have potential for both negative and positive effects to the environment.” Without being specific as to the possible negative impacts, the annex also

¹²² World Bank, *CC DPL-I PD, op. cit.*, para 2.18, pg. 64. The PD affirmed, however, that this risk could “be mitigated through a combination of good design and transparency” and added that the impact of an increase in energy prices on the poor could be reduced by introducing a compensatory cash transfer program. However, this was not done in connection with the CC DPL.

¹²³ *Ibid*, paras. 194-198, pp. 60-61.

observed that “to enhance outcomes and improve the rule of law,” the CC DPL series proposed policy actions for forest governance and law enforcement to reduce illegal logging and use of fire in land conversion. Concerning adaptation and disaster preparedness and affirming that Indonesia was “susceptible to all major climate change risks (drought, floods, landslides, sea level rise) except cyclones” and that water management was a key adaptation issue, it argued that the proposed policy actions would have either a beneficial or neutral effect on the environment. And, in the case of the third major policy area, it stated that, while national legislation concerning natural resource management and the environment was detailed and extensive, the regulatory framework was “often overlapping and contradictory between central government and regional level” and that, “without strong enforcement from the central government, or strong incentives driving local leadership to take a proactive role in conforming to national environmental legislation and regulation, success at the local level depends largely on the level of commitment or political will of the individual leadership.” This frequent “disconnect” between central and local government policies and actions (or inaction) would subsequently prove to be an impediment to the CC DPL’s progress in the area of forest and peatland governance. However, the policy actions in this area were also assessed as being “neutral.”¹²⁴

The annex also contained a table summarizing the “environmental review” of the proposed CC DPL policy actions, which identified the potential positive and negative effects in the mitigation policy subareas, as reproduced in Annex Table 9. This analysis followed the guidance provided in the World Bank toolkit cited above, and thus is an example of good practice. However, some potential negative impacts, such as the possible increased use of fuelwood, as well as kerosene, in response to electricity tariff increases were not identified. The ICR did not address the potential negative environmental impacts of the policy actions recognized for CC DPL-I or in relation to achievement of the triggers and other indicative actions prescribed for CC DPL-II and subsequent operations, including those identified in Annex Table 9. However, this oversight is a common shortcoming of ICRs for development policy operations, as this is not presently required in such reports.¹²⁵ The same observation applies to poverty and social impacts, for which there was also a specific annex in the PD.¹²⁶ The general conclusion was that the program’s social and poverty impacts would generally be positive or neutral, but there was potential for negative effects related to REDD and geothermal energy development that needed to be addressed by GOI.

For this assessment, the Bank team consulted the good practice note entitled *Using Poverty and Social Impact Analysis to Support Development Policy Operations* and referred to the same Indonesia-specific documents utilized as part of the environmental assessment plus other Bank documents entitled *Making the New Indonesia Work for the Poor* (2006) and *Developing a Market for REDD in Indonesia* (2009). The annex stated that the CC DPL operations would

¹²⁴ *Ibid*, pg. 114.

¹²⁵ See, Independent Evaluation Group, *Environmental and Social Risk Management in Development Policy Finance: A Learning Evaluation*, forthcoming.

¹²⁶ This annex covered the following topics: (i) poverty reduction; (ii) human development outcomes; (iii) employment; (iv) participatory processes and consultations for GOI climate change agenda; and (v) social and poverty impacts of the CC DPL operations *per se*.

support REDD readiness activities – financed with the aforementioned grant from the Bank-administered Forest Carbon Partnership Facility (FCPF)¹²⁷ -- that included preparatory analysis, development of a regulatory framework, and identification of demonstration projects. In addition, it observed that GOI was elaborating a Strategic Environmental and Social Assessment (SESA), which is also referred to in Annex Table 9, as it prepared for implementation of REDD strategy options.¹²⁸ It contained a Box further describing this assessment, which noted that this tool could be used to assess drivers of deforestation, assess REDD demonstration activities in specific localities, identify issues related to land and forest use raised by key stakeholders, and describe governance concerns such as the distribution of REDD revenues.¹²⁹

Annex Table 9. Potential Positive and Negative Environmental Impacts of Proposed Indonesia CC DPL Program.

Policy Action	Potential Negative Effects and Government Mitigation Capacity	Potential Positive Impacts
Improve regulatory framework for REDD implementation and develop demonstration activities	<p>Deforestation moves outside of areas designated for REDD.</p> <p>Potential negative impacts and capacity development can be addressed through properly applied best practices in consultative process, design and compensation approaches.</p> <p>The ongoing development of REDD program is a focal point for efforts to address these issues.</p> <p>Indonesia's aim is to be responsive to the international REDD framework (with development partner support) offers a good chance that identified issues can be addressed responsibly (although resources could be a barrier).</p> <p>GOI is undertaking a Strategic Environmental and Social Assessment that will help to develop the stakeholder assessments and strategic options to help in developing appropriate mitigation responses.</p>	<p>Deforestation rates decreased</p> <p>REDD contributes to conservation of biodiversity (e.g., tigers)</p> <p>Concentrating on three provinces contributing over half of deforestation (Riau, Central Kalimantan, South Sumatra) can have significant effects.</p>
Improve policy framework to promote renewable energy development and investment	<p>Potential for PLN to increase tariffs for electricity, potentially leading to increase in kerosene use for cooking instead of electric stove.</p> <p>GOI has experience deploying a social safety net program (unconditional cash transfer to poor) during the previous fuel subsidy cuts to mitigate rise of kerosene price.</p>	<p>Cleaner, lower emissions power generation</p> <p>Promotion of clean domestic energy</p> <p>Reduced emissions of GHGs and conventional pollutants.</p>

¹²⁷ See also *Readiness Preparation Project Proposal Note on a Proposed Grant of US\$ 3.6 Million to the Republic of Indonesia for REDD+ Preparation Support*, Report No. 61995 (with resources from the Forest Carbon Partnership Facility), no date (grant approved March 2011).

¹²⁸ Terms of Reference for this SESA were found on line and a REDD Readiness Update for Indonesia issued by FCPF in March 2012 indicated that its ESMF would be implemented by "DKN [the National Forestry Council], an independent body that specializes in forest policy and consultations

¹²⁹ World Bank, *CC DPL-IPD*, *op. cit.*, pg. 106.

The annex affirmed that the potential for negative social/poverty outcomes depended on how a REDD scheme or potential peatland intervention is designed and implemented. It stressed that more work was needed to harmonize regulations and incentives across departments and levels of government to ensure adequate approaches to REDD revenue distribution and fiscal balance within local governments and indicated that there was a lack of capacity among regional stakeholders to deal with the complex issues surrounding carbon trade, avoided deforestation, and monitoring pilot implementation.¹³⁰ On the more positive side, it observed that this capacity was being developed through an expanding range of donor and NGO programs and with active civil society participation.

¹³⁰ For a recent assessment of the social, including distributional, issues associated with REDD implementation, see Anthony Hall, *Forests and Climate Change: The Social Dimensions of REDD in Latin America*, Edward Elgar, Cheltenham, United Kingdom, 2012. This examination applies equally to the Indonesian case. See also CIFOR's publication edited by Arild Angelsen, Maria Brockhaus, William D. Sunderlin, and Louis V. Verchot, *Analyzing REDD+: Challenges and Choices*, Bogor, Indonesia, 2012, and country-specific Occasional and Working Papers by various authors regarding the REDD+ experience to date, including for Brazil, the Democratic Republic of Congo, Lao People's Democratic Republic, Papua New Guinea, Tanzania, and Vietnam, issued by CIFOR in 2013.

Annex B3. Parallel Technical Assistance Grants

Four main TA programs were implemented by AFD (including financing of a McKinsey abatement curves study):

- Providing expertise in the forestry sector to BAPPENAS;
- Financing international expertise for the implementation of a scheme to reduce emissions of greenhouse gases (GHG) in the cement industry for the Ministry of Industry;
- Financing a feasibility study of a small-scale green carbon market so that small-scale forest plantations (mainly villages) can have access to a voluntary carbon market (voluntary buyers: individuals, NGOs, SMEs with a compensation policy, etc.) for the Ministry of Forestry; and,
- Developing a tool for decision support in land-use planning (taking into account local development needs, the dynamics of forest resources, the risks of climate change, biodiversity) for the Ministry of Forestry.

The JICA Technical Assistance program was composed of three sub-projects:

- The Low-Carbon Development Strategy Project Integrating Mitigation and Adaptation Actions into National Development Planning (counterpart: BAPPENAS);
- Capacity development for vulnerability assessment (counterpart: Meteorology, Climatology and Geophysics Agency); and,
- Capacity development for developing national GHG inventories (counterpart: Ministry of Environment).

The first sub-project above was considered to be the most important since it included support for the development of the National Action Plan on Greenhouse Gas Emissions Reduction (RAN-GRK), as well as for the Regional Action Plan for Greenhouse Gas Emissions Reduction (RAD-GRK).

Annex B4. Indonesia 2020 emission reduction targets and policies

Forestry and Peatlands:

Target: 26 percent -- 0.672 Gt of CO₂e; 41 percent -- 1.039 Gt of CO₂e to be reduced

Policies taken to support the RAN-GRK:

- Reduction of GHG and at the same time promote a safe environment, prevent disasters, absorb workforce, and increase state's and community's revenues.
- Management of marsh water system and network in marsh areas.
- Maintenance of marsh reclamation network (including existing peat lands).
- Enhancement of productivity and efficient production of peat lands with low emission and absorb CO₂ optimally.

Strategies:

- Suppress the rate of deforestation and forest degradation to reduce GHG emissions.
- Increase planting to increase GHG absorption.
- Increase the efforts to secure forest areas from fires and illegal logging and apply sustainable forest management.
- Conduct improvement of water system network and dividing blocks and stabilize water level elevation on marsh water system network.
- Optimize land and water resources without deforestation
- Apply land management and agricultural farming technologies that have lowest GHG emissions and can absorb CO₂ optimally.

Energy and Transport Sectors:

Target: 26 percent – 0.038 Gt of CO₂e; 41 percent – 1.056 Gt of CO₂e

Policies taken to support the RAN-GRK:

- Increased energy saving.
- The use of cleaner fuels (fuel switching).
- Enhancement of new and renewable energy utilization.
- Utilization of clean technologies for both power generation and transportation equipment.
- Development of low emission, sustainable, and environmentally friendly national mass transport.

Strategies:

- Conserve the final [meaning?] energy through the application of cleaner and more efficient technologies and reduction in the consumption of non-renewable energy (fossil).
- Encourage the use of new and renewable energy in small and medium scales.
- (Avoid) – reduce travel needs, particularly in cities (trip demand management), through land use management, reduced travel activity, and unnecessary distances.
- (Shift) – shift from using private vehicles (transportation facilities with high energy consumption) to low-carbon transportation pattern, such as non-motorized, public, or water transportation facilities.
- (Improve) – improve energy efficiency and carbon release reduction in motorized vehicles in transportation facilities.

Annex C. List of Persons Met

In Washington

World Bank

Joachim von Amsberg, former Country Director (2007-2010)

Stefan Koeberle, former Country Director (2010-2013)

Josef Leitmann, former Environmental Coordinator in Jakarta and lead author of CEA

Timothy Brown, Task Team Leader CC DPL

Center for Global Development

Frances Seymour, Senior Fellow and former Executive Director of CIFOR, Bogor

In Jakarta

World Bank

Yogana Prasta, Operations Advisor

George Soraya, Acting Practice Manager, Social, Urban, Rural, and Resilience Global Practice

Werner Kornexl, Senior Environmental Specialist, former Environmental Coordinator

Cary Ann Cadman, Senior Environmental Specialist, Environmental Coordinator

A.J. Glauber, Senior Environmental Specialist, Landscape Management Coordinator

Ina Binari Pranoto, Senior Environmental Specialist

Mubariq Ahmad, Senior Environmental Specialist (former member of REDD+ Taskforce)

Iwan Gunawan, Senior Disaster Risk Management Specialist

Puguh Imanto, Energy Specialist

Ilham Abla, Water Resources and Irrigation Specialist (retired)

Anita Kendrick, Consultant, Climate Change and Environmental Specialist

George Henry Stirrett, Consultant, Environmental Specialist

Asian Development Bank

Virza Sasmitawidjya, Climate Change Specialist (former environmental consultant to World Bank, JICA, and AFD)

Government of Indonesia

Ayu Sukorini, Director of Loans and Grants, Ministry of Finance

Tor Tobibng, Deputy Director of Loans and Grants, Ministry of Finance

Zandy A. Kassat, Deputy Director of Multilateral Loans and Grants, Ministry of Finance

Dewo Broto Joko Putranto, Director for Multilateral Foreign Funding, BAPPENAS

Naily Chilmijati, Assistant Director for Environment, Coordinating Ministry of Economic Affairs (CMEA)

Subejo, SE, MM., Advisor to Assistant Director for Environment, CMEA

M. Aulia Putra Saragih, Public Policy Analyst of Deputy Assistant for Environment, CMEA

Agus Purnomo, Managing Director, Sustainability & Strategic Stakeholder Engagement,

GAD Agribusiness and Food and former Director of Secretariat of National Climate Change Council and official of the Ministry of Environment)

Wahjudi Wardojo, Senior Advisor for Terrestrial Policy, The Nature Conservancy and former Deputy Director General, Ministry of Forestry

In Bogor

Center for International Forestry Research (CIFOR)

Lou Verchot, Head of Climate Change Unit (by telephone from Jakarta)

Daniel Murdiyarso, Principal Scientist (former member of REDD+ Taskforce)

World Agroforestry Center (ICRAF)

Meine van Noordwijk, Chief Scientist and Professor of Agroforestry