REPUBLIC OF INDONESIA
BAPPENAS

REPUBLIC OF INDONESIA
CLIMATE CHANGE PROGRAM LOAN (2010-2012)

PROGRAM EVALUATION FINAL REPORT

MARCH 2013

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

GLOBAL GROUP 21 JAPAN, INC. (GG21)

INSTITUTE FOR GLOBAL ENVIRONMENTAL STRATEGIES (IGES)

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Abbreviations

ADB	Asian Development Bank
AFD	Agence Française de Développement
APBN	State Budget of Revenues and Expenditures
AusAID	Australian Agency for International Development
BAKOSURTANAL	National Coordinating Agency for Surveys and Mapping, Republic of Indonesia
BAPPENAS	The National Development Planning Agency, Republic of Indonesia
BAU	Business as Usual
BMG	The Meteorology and Geophysics Agency
BMKG	The Agency of Meteorology, Climatology and Geophysics, Republic of Indonesia (renamed from BMG in September 2008)
BNPB	The National Disaster Management Agency, Republic of Indonesia
BPBD	Local Disaster Management Agency, Republic of Indonesia
BPN	National Land Agency, Republic of Indonesia
BRT	Bus Rapid Transit
CC-DAK	Climate Change Special Allocation Fund
CCPL	Climate Change Program Loan
CFS	Climate Field School
CMEA	Coordinating Ministry for Economic Affairs, Republic of Indonesia
CMPW	Coordinating Ministry for People's Welfare, Republic of Indonesia
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
COP	Conference of the Parties
CVI	Coastal Vulnerability Index
CY	Calendar Year
DAK	Special Allocation Fund (Dana Alokasi Khusus)
DG	Directorate General
DKI	Special Region (Daerah Khusus Ibukota)
DME	Energy Self-Sufficient Village Program
DNPI	National Council on Climate Change
FIT	Feed-In Tariff
FMU	Forest Management Unit
FY	Fiscal Year
GEF	Global Environment Facility
GERHAN	National Movement on Forest and Land Rehabilitation (Gerakan Nasional Rehabilitasi Hutan dan Lahan)
GG21	Global Group 21 Japan, Inc.
GHG	Greenhouse Gas

GOF	The Government of France
GOI	The Government of Indonesia
GOJ	The Government of Japan
GTZ	German Agency for Technical Cooperation (Deutsche Gesellschaft für Technische Zusammenarbeit)
ICCSR	Indonesia Climate Change Sectoral Roadmap
ICCTF	Indonesia Climate Change Trust Fund
IDR	Rupiah
IGES	Institute for Global Environmental Strategies
INAGOOS	Indonesia Global Ocean Observing System
IPP	Independent Power Producer
IUPHHK	Timber forest products utilization permit (Izin Usaha Pemanfaatan Hasil Hutan Kayu)
Jabodetabek	Combined area of Jakarta, Bogor, Depok, Tangerang and Bekasi
JICA	Japan International Cooperation Agency
JTA	Jabodetabek Transportation Authority
KfW	German Reconstruction Bank (Kreditanstalt für Wiederaufbau)
KPHL	Protection Forest Management Unit
KPHP	Production Forest Management Unit
kW	Kilowatt
kWh	Kilowatt hour
LUCF	Land Use Change and Forestry
LULUCF	Land Use, Land-Use Change and Forestry
MEMR	Ministry of Energy and Mineral Resources, Republic of Indonesia
MMAF	Ministry of Marine Affairs and Fisheries, Republic of Indonesia
MOA	Ministry of Agriculture, Republic of Indonesia
MOE	Ministry of Environment, Republic of Indonesia
MOF	Ministry of Finance, Republic of Indonesia
MOFR	Ministry of Forestry, Republic of Indonesia
MOH	Ministry of Health, Republic of Indonesia
MOHA	Ministry of Home Affairs, Republic of Indonesia
MOI	Ministry of Industry, Republic of Indonesia
MOPW	Ministry of Public Works, Republic of Indonesia
MP3EI	Masterplan for Enhancement and Acceleration of Economic Development
MRT	Metropolitan Rapid Transit
MRV	Measurement, Reporting and Verification
MW	Megawatt
NAMA	Nationally Appropriate Mitigation Action
ODA	Official Development Assistance

PBB	Performance Based Budgeting
PIPIB	The Indicative Map for Suspension on New Permits (Peta Indikatif Penundaan Ijin Baru)
PLN	State Electricity Company, Republic of Indonesia
POLA	Integrated Water Resources Management Patterns and Plans (Pola Pengelolaan Sumber Daya Air)
PPA	Power Purchase Agreement
PREP-ICCTF	Preparatory Arrangements for the Indonesia Climate Change Trust Fund
RAD-GRK	Regional Action Plan on Green House Gas Emissions Reduction
RAN-API	National Action Plan on Climate Change Adaptation
RAN-GRK	National Action Plan on Green House Gas Emissions Reduction
RAN-PI	National Action Plan Addressing Climate Change
REDD	Reducing Emissions from Deforestation and Degradation
REDD+	An enhanced concept of REDD including the objectives of conservation, the sustainable management of forests and enhancement of forest carbon stocks
REFF-BURN	Integrated Program for Reducing Emissions from Fossil Fuel Burning
RENSTRA	Strategic Plan
RKP	Government Action Plan
RPJMD	Regional Medium-Term Development Plan
RPJMN	National Medium-Term Development Plan
RUPTL	Electricity Supply Business Plan
SC	Steering Committee (of CCPL)
SIGN	National Greenhouse Gas Inventory System
SNC	The Second National Communication to the United Nations Framework Convention on Climate Change
SOP	Standard Operation Procedure
SRI	System of Rice Intensification
SVLK	Timber Legality Verification System
TTM	Technical Committee/Technical Task Force Meeting (of CCPL)
UKP4	Presidential Working Unit for Supervision and Management of Development
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollars
WKP	Mining Work Area (of Geothermal) (Wilayah Kerja Pertambangan)

1. The outline of the program evaluation

1.1. Background

a) Necessity to learn from existing international cooperation schemes toward the new international framework on climate change

As we face the end of the first commitment period of the Kyoto Protocol, international dialogues to establish a new international framework for climate change policy are ongoing. Since greenhouse gas (GHG) emissions from emerging countries are increasing rapidly, increasing climate finance and the development of new mechanisms such as Reducing Emissions from Deforestation and Degradation-Plus (REDD+) are actively being discussed to encourage developing countries' efforts in GHG emissions reduction.[2] The new framework is expected to further promote international cooperation with the developing countries' efforts to address climate change while tackling a number of development challenges. To this end, governments and international development agencies are carrying out hot debates on effective mechanisms for Nationally Appropriate Mitigation Actions (NAMAs), Monitoring, Reporting and Verification (MRV) and GHG inventory systems. In this context, existing cooperation schemes on national policy development and/or institutional reforms addressing climate change issues in developing countries could provide a wide variety of lessons to the ongoing discussions.

b) Indonesia's commitment to climate change issues

Although it is categorized as a Non-Annex I country under the United Nations Framework Convention on Climate Change (UNFCCC), Indonesia is one of the world's top GHG emitting countries due to the large amount of GHG emissions from deteriorating forestry and peatland, and the sharply increasing energy demands accompanying the country's rapid economic growth. Likewise, Indonesia is considered to be highly vulnerable to the impacts of climate change such as floods, droughts and rising sea levels because the country is surrounded by the sea and has a large proportion of its population engaged in agriculture and fisheries. The country's vulnerability might result in the stagnation of economic activities and an increase in poverty, and thereby hinder sustainable growth.

Against this background, the Government of Indonesia (GOI) has actively committed to climate change issues. Indonesia hosted the 13th session of the Conference of the Parties to the UNFCCC (COP13) in 2007, and worked hard on concluding the "Bali Roadmap" as the chair

[2] Overseas Environmental Cooperation Center (2012). *New mechanisms information platform.* http://www.mmechanisms.org/mechanism/index.html. (Accessed December 11, 2012.)

country. At the G-20 summit held in Pittsburgh in September 2009, Dr. H. Susilo Bambang Yudhoyono, the President of the Republic of Indonesia announced a national target to reduce GHG emissions by 26% below Business as Usual (BAU) by 2020, adding that it could be reduced up to 41% if international support was available.[3]

At the same time, Indonesia has developed its domestic policies addressing climate issues. The GOI has introduced a series of action plans, laws and institutions to promote climate change mitigation/adaptation measures, and has continuously worked on ground-level projects. Particularly during the last several years, the GOI has made efforts to mainstream climate change in the national development plan, and established several basic plans including the *National Action Plan addressing Climate Change* (*RAN-PI*, 2007) and *National Development Planning: Indonesia Responses to Climate Change* (*Yellow Book*, 2008).

Table 1-1: Key Documents describing GOI's climate change policies

Title	Year	Publisher/ Coordinator	Contents
National Action Plan addressing Climate Change (RAN-PI)	2007	MOE	Short-, medium- and long-term action plans for mitigation and adaptation
National Development Planning: Indonesia Responses to Climate Change (Yellow Book)	2008	BAPPENAS	Developed as an introductory document to the next medium-term (2010-2014) national development plan based on the former plan (RPJM: 2004-2009)
Indonesia Climate Change Sectoral Roadmap (ICCSR)	2010	BAPPENAS (supported by GTZ)	Setting priority issues and key policies for each five-year period leading up to 2030
The Second National Communication (SNC)	2011	MOE and (Supported by the UNDP and GEF)	National report to UNFCCC on GHG emissions, impacts of climate change, and mitigation and adaptation policies.

MOE, Ministry of Environment
BAPPENAS, The National Development Planning Agency
GEF, Global Environment Facility
GTZ, German Agency for Technical Cooperation

While Indonesia is actively working on climate change, the country's further progress might be impeded by severe fiscal conditions owing to external factors such as the recent world financial crisis and soaring oil prices.

[3] This 26% reduction goal was further elaborated later and submitted to the UNFCCC in 2010 as a voluntary GHG emissions reduction based on the Copenhagen Accord.

In addition, as a country with abundant carbon sinks such as forest resources,[4] it is particularly important for Indonesia to secure financial resources to fully utilize them. To improve its access to Global Climate Change Funds and the carbon market, the GOI has earnestly developed climate change policies to overcome institutional and/or technical constraints.

c) Climate change issues in Japan's development aid policy

Climate change issues are also important in Japan's development aid policies.[5]

In January 2008, the Government of Japan (GOJ) announced the "Cool Earth Partnership," a financial mechanism to assist developing countries aiming to achieve emissions reductions and economic growth simultaneously, and working to contribute to climate stability. The Cool Earth Partnership intends to provide funds amounting to approximately 10 billion USD (1,250 billion JPY as of January 2008) in aggregate over five years (2008-2012). This Partnership is (and will be) provided to developing countries that are making efforts to reduce GHG emissions and achieve economic growth in a compatible way, on the basis of policy consultations between Japan and these countries. This initiative exhibits GOJ's intention to enhance its cooperation on climate change policies in developing countries as were agreed in the Bali Roadmap and the Copenhagen Accord.[6]

1.2. The outline of the Indonesia Climate Change Program Loan (CCPL)

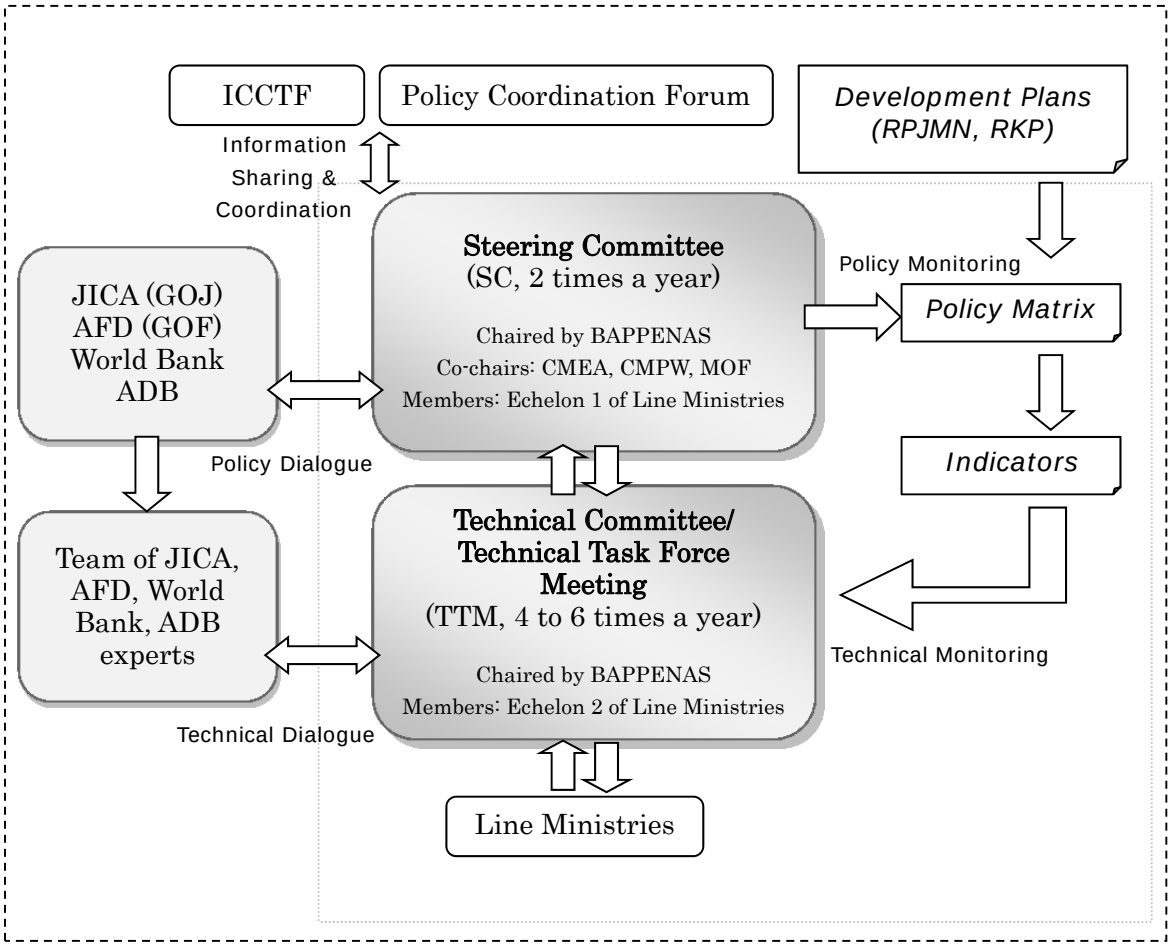
a) Objectives and the structure of support

In response to the GOI's call for a cooperation program addressing climate change issues, GOJ decided to provide its first large-scale program loan under the Cool Earth Partnership. The Indonesia Climate Change Program Loan (ICCPL) was agreed between the GOI and GOJ in August 2008. ICCPL was designed to support a wide range of Indonesian efforts to deal with climate change issues, including some key policy reforms, through the provision of 300 million USD per year over three years as general budget support instead of financing individual climate change mitigation and adaptation projects. Following this agreement, Agence Française de Développement (AFD) also agreed to provide co-financing. In addition, the World Bank

[4] AFD and JICA (2012). *CCPL 2008-2010 Ex-Post Evaluation*.
[5] The Ministry of Foreign Affairs, Japan (2011). *Official Development Assistance Homepage: Sectoral Development Plan*.
http://www.mofa.go.jp/mofaj/gaiko/oda/bunya/environment/initiative.html. (Accessed December 11, 2012.)
[6] The Ministry of Foreign Affairs, Japan (2011). *Beyond the Copenhagen Accord: international negotiation on Climate Change.*
http://www.mofa.go.jp/mofaj/press/pr/wakaru/topics/vol52/index.html. (Accessed December 11, 2012.)

announced it would join the CCPL in 2010, and the Asian Development Bank (ADB) followed in 2011. While the ADB did not participate in a co-financing scheme, because the GOI announced it would cancel loan receipts through the CCPL scheme in 2011, it actively participated in the policy dialogues indicated in the diagram below, and in organizing a conference among development partners.

Figure 1-1: Coordination Structure of CCPL



CMEA, Coordinating Ministry for Economic Affairs

CMPW, Coordinating Ministry for People's Welfare

MOF, Ministry of Finance

RKP, Government Action Plan

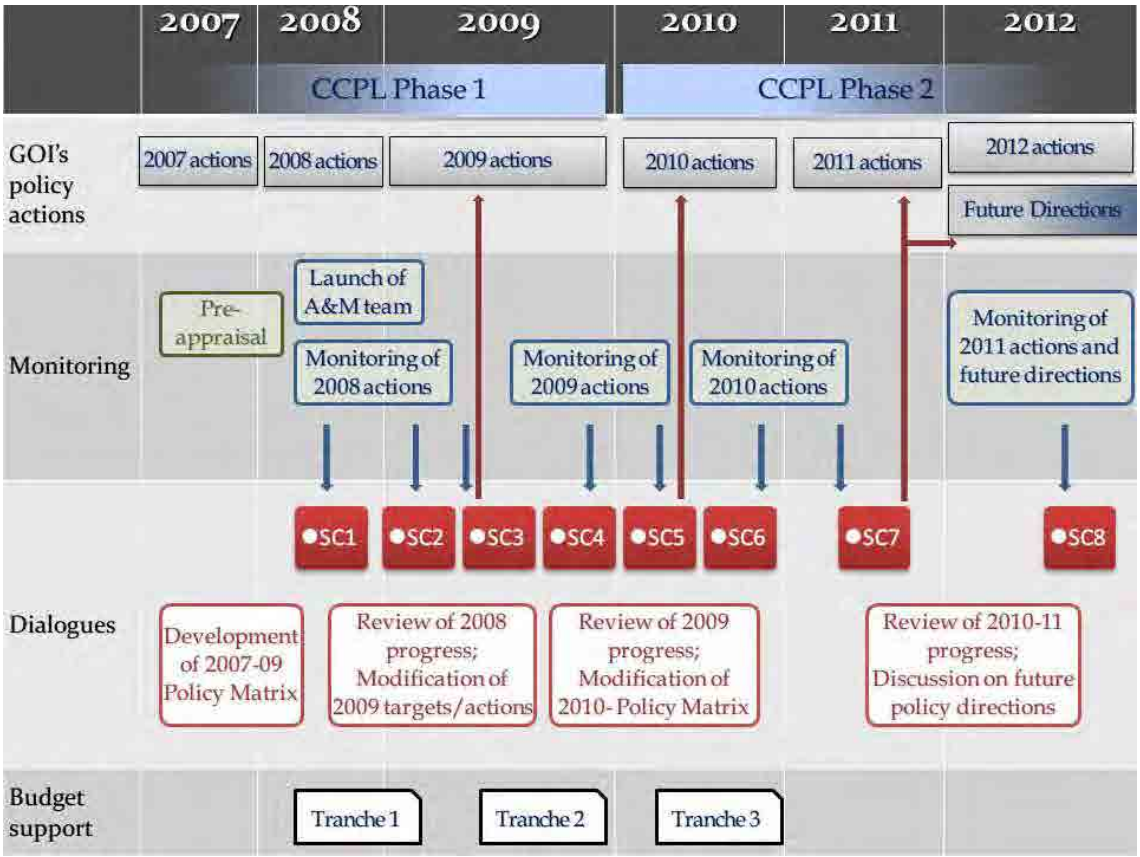
The CCPL supports the GOI to strengthen climate change policies and in mainstreaming climate issues into overall national development policies through the following components:

1) **Financial assistance (**general budget support**)** is provided to the GOI to encourage its efforts in the development and implementation of climate change policy in the national development plan;

2) **Monitoring the implementation of climate change policies**, leading to **enhanced coordination among stakeholders (within the GOI as well as between the GOI and development partners)** through periodically-held policy dialogues to share common understandings on the latest situation of climate change policies in Indonesia, including the current challenges and desirable policy directions; and
3) Identifying **barriers for implementing the climate change policies, necessary measures and further cooperation schemes,** through the monitoring noted above.

Periodic updates of information on the attainments and challenges of climate change policies are necessary in order to pursue the above objectives. The CCPL adopted two methodologies to this end, namely, the Policy Matrix, a set of policy targets/actions covering both short-term (yearly) and medium-term (three or more years) goals extracted and summarized from the GOI's key policy documents, and joint monitoring activities to analyze the progress/attainments of the targets/actions and to identify challenges. The following diagram shows the development of the Policy Matrix, implementation of policy targets/actions, the monitoring activities and the policy dialogues during CCPL Phases 1 and 2.

Figure 1-2: GOI's policy actions, monitoring and policy dialogue during CCPL periods



(Developed by the author.)

b) Sectors supported under the CCPL

Policy measures to address climate change are required in diverse sectors in Indonesia, which include forestry, energy, solid waste management, agriculture and fisheries. While preparing the CCPL Phase 1 (2007-2009) Policy Matrix, the GOI and development partners held dialogues to identify the sectors and issues to be covered under the scheme, and selected the following issues among those prioritized in the GOI's key policy documents including *RAN-PI* and *the Yellow Book*:

1) Improvement of forest management and governance and the development of incentive mechanisms to reduce GHG emissions and enhance carbon sinks from the LULUCF sector;
2) Institutional arrangements to promote renewable energy development and energy saving to reduce GHG emissions from the energy sector;
3) Improvement of water resources management, irrigation asset management and strengthening of farmers in anticipation of climate change adaptation; and
4) Cross-cutting issues including the mainstreaming of climate change, the Clean Development Mechanism (CDM) and early warning systems.

During CCPL Phase 1 the GOI and development partners repeatedly discussed the challenges and necessary measures for the mitigation and adaptation issues. The results of these discussions were reflected in the new Policy Matrix for CCPL Phase 2 (2010, 2011 and Future Policy Directions) focusing on three pillars, as follows:

1) **Key Policy Issues** including the Mainstreaming of Climate Change in National Development, a Financing Scheme and Policy coordination for Climate Change, and GHG Emissions/Absorption Measurement and Inventory;
2) **Mitigation** in the areas of Forest Management and Governance, Peatland Management, REDD+, Renewable Energy Development, Energy Saving/Efficiency, Energy Price Reform, Overall Transportation Policies, Modal Shifting and Traffic Management; and
3) **Adaptation** in the areas of Understanding of Climate Change Impacts and Vulnerability Assessment, Water Resources Management, Agriculture, and Marine, Fisheries and Coastal Communities.

1.3. Program evaluation policies, focuses and methods

The CCPL Policy Matrix incorporates 30 to 50 policy targets/actions across six to eight sectors as the targets of monitoring and policy dialogues. Note, however, that neither budget nor technical support was directly allocated to those policy targets/actions under the CCPL scheme. The CCPL was designed to support policy development and financial, legal and institutional

reforms to accelerate on-the-ground activities addressing climate change issues in Indonesia through periodic monitoring activities on the specified targets/actions, and the policy dialogues based on the monitoring results. In other words, the CCPL could be understood as an attempt to support the GOI to mainstream climate change policies in its development policies by providing occasions for promoting discussions among relevant stakeholders on the required policies, challenges and potential technical cooperation.

Therefore, the progress, attainments and barriers for each policy target/action are not appropriate for the objectives of this program evaluation. Instead, the study team tries to analyze the CCPL's contribution to the mainstreaming of climate change in Indonesia, focusing on the aspects of: (1) contribution of the CCPL framework and process to the mainstreaming of climate change in Indonesia as a whole; and (2) progress in development/mainstreaming in each sector covered in the CCPL Policy Matrix.

Before attempting the analysis of the above-mentioned two aspects of the CCPL's contributions, the authors would like to clarify how "the mainstreaming of climate change policies" can be understood. Generally speaking, a certain issue is not "mainstreamed" among overall policy directions simply by statements on specific policy actions/targets to address the issue in policy documents, such as the national development plan. Here, gender mainstreaming can be taken as an example. Gender issues could become mainstreamed when (a) statements on "women" or "gender" appear in the headings of the national plan, although this is only the initial step for gender mainstreaming, to be followed by a series of fundamental shifts including: (b) that the government policies at every level are formulated and implemented with sufficient consideration of gender issues; and (c) that holistic reforms of government organizations and/or budget systems are put into effect to ensure the effective implementation of (a) and (b).[7]

In the case of climate change issues, it would be appropriate to examine the following questions to analyze the progress of mainstreaming:

a) Whether climate change issues have been integrated and highlighted in the development plans, key laws and regulations;
b) Whether policies have been planned and/or reviewed with sufficient consideration into their impacts in terms of GHG emissions and the vulnerability of the targeted/surrounding society/population to the impacts of climate change; and
c) Whether institutional and/or financial reforms have been advanced toward effective

[7] Gupta, Joyeeta (2010). "Mainstreaming Climate Change: a theoretical exploration." In Gupta and Van Der Grijp, Nicolien, eds. (2010) *Mainstreaming Climate Change in Development Cooperation: Theory, Practice and Implications for the European Union*, Cambridge: Cambridge University Press.

implementation of (a) and (b).

Additionally, it is desirable for these three types of reforms to be advanced in all relevant sectors as well as the overall national plans. Likewise, it is desirable for them to be spread among all provinces, prefectures, municipalities and community levels as well as the central government. Therefore, the study team attempts to analyze the progress of mainstreaming at the sectoral and local levels where relevant information was collected.

a) Evaluation methods

(i) The study team

The program evaluation was conducted by five experts belonging to the GG21-IGES joint enterprise, which was commissioned to support JICA's monitoring of CCPL activities.

(ii) Evaluation period

To collect required information for the program evaluation, the CCPL monitoring support team has conducted field studies four times in Jakarta, Indonesia during April-May, July-August and October-November 2012, and January-February 2013.

(iii) Evaluation methods and materials

The study team attempted both qualitative and quantitative analyses of the contribution of the CCPL during the period from 2008 to 2012. On the one hand, the following points were qualitatively examined:

- The progress and attainments of policy targets/actions in 2010 and 2011, and the prospects of the "future directions" after 2012 specified in the CCPL Policy Matrix;
- The attainments of the eleven targets set by the GOI and JICA to measure the medium-term outcomes of the CCPL;
- Related laws, policy plans, guidelines and other official documents developed by the GOI, GOJ, the Government of France (GOF) and other international organizations during the period; and
- Interviews with the stakeholders including the GOI officers, experts from development partners and researchers in Indonesia.

On the other hand, a quantitative analysis was attempted to estimate the prospects of future GHG emissions reductions generated as results of the attained policy targets/actions covered in the CCPL Policy Matrix. Note, however, that the amount of GHG emissions reductions is examined not as an attainment of the CCPL scheme, but as secondary evidence for the expected impacts of the CCPL.

b) Constraints of evaluation analysis

This program evaluation has a few limitations, as follows. First, this program evaluation does not include a detailed analysis of the results of each policy target/action since the main focus is placed on the contributions of CCPL schemes to the aforementioned “mainstreaming.” The analyses of the progress/attainments of policy targets/actions are examined in the monitoring report.

Second, it should be noted that some of the impacts referred to in this evaluation report have not actually been generated at the moment but will be expected to be generated hereafter. Since most policy targets/actions aim to establish an environment essential for effectively promoting climate change policy in the future, the expected impacts may not materialize immediately. Therefore, the study team attempts to estimate long-term impacts by way of asking how the legal/institutional/financial reforms as well as the improved coordination among line ministries during the CCPL period would contribute to the future progress of climate change policies in Indonesia.

Third, the position of the evaluation team might be a constraint in terms of ensuring the neutrality of the evaluation. While the evaluation team sincerely keeps impartiality in mind, with regard to part of the topics for which the team carried out the evaluation/analysis, it is unrealistic for the team to work from the completely neutral position of a third party, because the team itself has engaged in the operation of the CCPL. In this regard, by clearly stating the experience of the team as it engaged in the support of the CCPL process, it is expected that the result of this evaluation based on the experience would also be well utilized for analysis in a future independent evaluation.

2. Analysis (1) Evaluation of the overall contribution of the CCPL

2.1. Perspective in evaluating the overall contribution of the CCPL

a) Clues to understanding the CCPL's contribution to the mainstreaming of climate change issues

As stated in 1.3, "Program evaluation policies, focuses and methods," the impact of the CCPL on the mainstreaming of climate change policy in Indonesia can be broadly categorized into two aspects: (1) the contribution of the CCPL framework and process to the mainstreaming of climate change in Indonesia as a whole; and (2) the progress of development/mainstreaming in each sector covered in the CCPL Policy Matrix. This chapter focuses on the former point, namely, the contribution of the CCPL framework and process.

We have argued that one should examine a few questions to analyze the progress of mainstreaming, as follows:

a) Whether climate change issues have been integrated and highlighted in the development plans, key laws and regulations;
b) Whether policies have been planned and/or reviewed with sufficient consideration of their impacts in terms of GHG emissions and the vulnerability of the targeted/surrounding society/population to the impacts of climate change; and
c) Whether institutional and/or financial reforms have been advanced toward effective implementation of (a) and (b).

Nevertheless, answers to these questions may not provide sufficient clues to evaluate if the CCPL contributed to the mainstreaming of climate change policies. The above reforms have been advanced through a variety of efforts made by the GOI's ministries and local governments, and therefore it would overvalue the CCPL's contribution to ascribe these reforms solely to the CCPL. However, there are several means through which the CCPL can be understood to have also contributed to the GOI's and local governments' efforts in advancing these reforms. For instance, the budget support disbursed under the CCPL could have mitigated fiscal constraints while the GOI tackled barriers to the reforms; or the CCPL's monitoring activities and policy dialogues could have enabled the stakeholders to share the necessary reforms and challenges, and facilitated common understandings.

With such a recognition, while we analyze the contribution of the CCPL we will focus on the issues of: (1) the reforms advanced during the CCPL period in Indonesia to enable or accelerate climate change policies; and (2) the impact made on these reforms, directly or indirectly, by the CCPL's framework and process.

The former issue will be examined through observing the progress of the reforms, including:

a) Formulation of upstream/national level policies such as *the ICCSR* and *the National Action Plan on GHG Emissions Reduction (RAN-GRK)*, to answer question (a) raised above on mainstreaming;
b) Development and implementation of sector level/local policies with sufficient consideration of GHG emissions reduction and adaptation to the impacts of climate change, to answer question (b) raised above; and
c) Improvement of financial mechanisms and organizational arrangements at the levels of ministries/local governments to effectively implement climate change policies, to answer question (c) raised above.

The latter issue, namely, the direct or indirect impacts of the CCPL, could be examined by way of looking back on the experiences of the CCPL, particularly its monitoring activities and the policy dialogues. It would be reasonable to state that the CCPL has generated direct impacts on CC mainstreaming if, for instance, some of the analysis made during the monitoring activities or the recommendations proposed at the policy dialogues were reflected in the actual policy implementation, or if the discussions at the dialogues resulted in additional cooperation projects to foster the above reforms. It could also be concluded that the CCPL has made indirect contributions to the mainstreaming of climate change policies in Indonesia, if the policy dialogues and monitoring activities provided opportunities for better coordination among the stakeholders within the GOI, and between the GOI and the development partners, and the required policy reforms made progress as a consequence.

b) Classification using the OECD-DAC's evaluation principles

The above issues to be examined in this evaluation study can be further broken down into five categories following the OECD-DAC's evaluation principles.

Table 2-1: Classification of the dimension of evaluation and related questions

Evaluation dimension	Specific questions to evaluate the CCPL's contribution
Relevance	● Whether it was relevant to supporting Indonesian climate change policy; ● Whether the cooperation framework, namely, budget support, the Policy Matrix, monitoring activities and policy dialogues, was relevant; and ● Whether the Policy Matrix was relevantly designed by appropriately covering sectors and setting outcome areas (targets).
Efficiency	● Efficiency will not be evaluated: there is no one-to-one correspondence between each policy action and the funds provided by the CCPL scheme.
Effectiveness	● Whether specified sector outcomes were attained (or are expected to be attained); and ● Whether the processes established in the CCPL (goal setting, monitoring activities and policy dialogues) have effectively worked to support the GOI.
Impact	● Whether sector outcomes specified in the Policy Matrix were attained; and ● Whether additional outputs to climate change policies in Indonesia are expected as a result of the CCPL's target setting, monitoring activities and policy dialogues.
Sustainability	● Whether the upstream policies formulated during the period and the outcomes attained in each sector would be sustained beyond the CCPL period.

2.2. Relevance

In this section, the three questions set in the table 2-1 above for the relevance of the CCPL will be explored.

a) Relevance to supporting climate change policy development in Indonesia

It is widely recognized that a "low carbon development path is essential for sustainable development while socio-economic development and poverty alleviation situate as the top priority issues for developing countries."[8] In regard to supporting the implementation of developing countries' mitigation/adaptation actions, the Bali Roadmap concluded at COP13 and the Copenhagen Accord "taken notice of" at COP15 clearly state that developed countries should provide sufficient, predictable and sustainable support towards funding, and technical and capacity development. Accordingly, climate change policy development in developing countries is a relevant target for international development assistance.

Subsequently, we should also ask whether Indonesia was/is a proper target for international cooperation addressing climate change issues; in fact, this question can be answered relatively easily.

[8] UNFCCC (2009). *Copenhagen Accord.* http://unfccc.int/resource/docs/2009/cop15/eng/l07.pdf. (Accessed January 16, 2013.)

On the one hand, Indonesia is known to be one of the world's largest GHG emitting countries when GHG emissions from the LULUCF sector are counted. At the same time, Indonesia's rapid economic growth is expected to continue, resulting in an increase in fossil fuel consumption both by industries as well as households, and due to the explosive spread of private vehicles. Needless to say, these phenomena will result in further GHG emissions in the sectors of energy, industry and transportation unless appropriate measures are taken. This means that Indonesia has a huge potential for reducing GHG emissions by making full use of its abundant carbon stocks in forests and peatland, and for introducing appropriate systems to promote advanced technologies toward low carbon economic development.

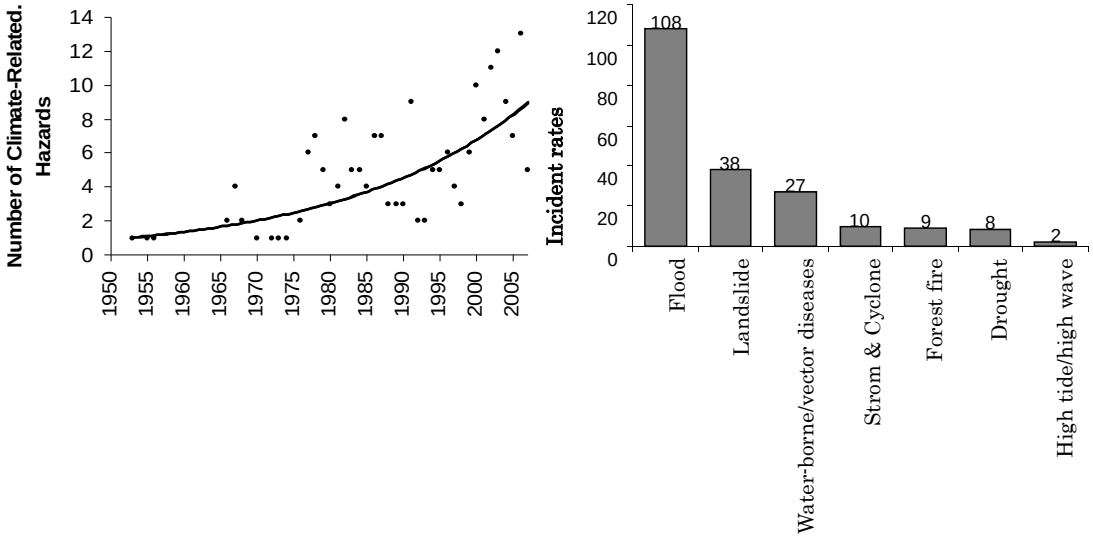
Table 2-2: GHG emissions in Indonesia

Year Sector	2000	2001	2002	2003	2004	2005
Energy	333,540	348,331	354,246	364,925	384,668	395,990
Industry	34,197	45,545	33,076	35,073	36,242	37,036
Agriculture	75,419	77,501	77,030	79,829	77,863	80,179
Solid Waste	151,578	153,299	154,334	154,874	155,390	155,609
LULUCF	649,254	560,546	1,287,495	345,489	617,280	No data
Peat Fire*	172,000	194,000	678,000	246,000	440,000	451,000
Amount (including LULUCF)	1,415,998	1,379,222	2,584,181	1,226,191	1,711,443	1,119,814 +LULUCF
Amount (excluding LULUCF)	594,738	624,676	618,686	634,701	654,162	668,814 +LULUCF

*Notes: Extraction of the emissions amount from peat fire is after Van der Werf (2008), "Climate control over variability of fire in tropical area and subtropical area," *Global Biogeochemical Cycles* No. 22, GB3028, pp. 1-13.
Source: The Indonesia Ministry of the Environment (2009). *Summary for Policy Makers: Indonesia Second Indonesia National Communication Under The United Nations Framework Convention on Climate Change*.

On the other hand, Indonesia recognizes itself as being quite vulnerable to the impacts of climate change: its territory is composed of thousands of islands, and the majority of its population is engaged in agriculture and fisheries. Changes in temperature and/or precipitation may cause a number of problems such as water scarcity, decreases in food production, increases in vector/water borne diseases, floods and droughts, and could seriously damage Indonesia's economy and society as well as human lives.

Figure 2-1: Number of climate related hazards observed in Indonesia
(By years, left, and by the types of hazards, right)



Source: The Indonesia Ministry of the Environment (2009). *Summary for Policy Makers: Indonesia Second Indonesia National Communication under The United Nations Framework Convention on Climate Change*.

The SNC indicates that the poor will be the most severely affected by an increase in climatic disasters, because they lack knowledge and techniques with regard to climate variability and therefore it is difficult for them to cope with abnormal climatic phenomena. In recognition of this, the GOI has worked on climate change adaptation, particularly focusing on food security and water resource management.

While working on the development of domestic policies on climate change mitigation and adaptation, Indonesia has also sought international support for these issues. Indonesia's mitigation target announced by the President in 2009, namely, to reduce GHG emissions by 26% less than BAU by 2020, was followed by the mention of a more ambitious target of a 41% reduction with international assistance. The government's aspiration to secure more international assistance for the further promotion of climate change measures can be clearly seen in its *List of Planned Priority external Loans and Grants* (also known as the Green Book).[9] In 2007, 9 (19%) out of 48 cases of project assistance and 9 (13%) out of 71 technical cooperation projects were related to climate change mitigation/adaptation. In 2009, 21 (38%) out of 56 cases of project assistance and 17 (24%) out of 71 technical cooperation projects were

[9] BAPPENAS (2007, 2008 and 2009). *List of Planned Priority external Loans and Grants (DRPPHLN)*. These documents are also known as the Green Book(s).

directly or indirectly related to climate change.[10]

Therefore, it could be concluded that it was relevant to support Indonesia's efforts in its legal, institutional and financial reforms to develop climate change policies.

b) Relevance of the CCPL framework

The CCPL was the world's first program loan addressing climate change issues. The unique design of its framework should have been developed to meet the intentions of the development agencies (i.e., JICA and AFD) as well as the direct counterparts (i.e., BAPPENAS and MOF): if the CCPL framework did not meet these intentions, we could conceive of the CCPL framework as being irrelevant. At the same time, as an unprecedented program involving various indirect counterparts, namely, the GOI's line ministries, the relevance of the CCPL framework from their viewpoints would also provide lessons for future cooperation programs. In fact, the relevance of the CCPL framework can be evaluated differently depending on the point of view.

We have a number of clues to analyze to determine if the CCPL framework sufficiently reflected the intentions of development agencies and counterparts. Firstly, climate change policies cover a variety of sectors, and therefore require the involvement of multiple ministries and local governments as well as the private sector.[11] Furthermore, in the case of Indonesia, multiple donor agencies and international organizations are working on institutional reforms and on-the-ground activities in each sector. Better coordination among multiple donors while ensuring the ownership of the recipient country is a key to successful cooperation addressing climate change issues. In this regard, an international cooperation scheme could effectively support necessary policy development in the developing country to work on climate change issues with sufficient consideration of the following points:

- To support upstream policy (policy planning, legislative reform) in various sectors;

[10] In this report, projects which meet the criteria below are defined as climate change related projects/technical assistance: (1) a project where the goals include mitigation/adaptation measures; and (2) a project including activities indicated in the "Long Term Development Plan" of *ICCSR* (for details, please refer to Attachment III, "the list of projects and technical cooperation").

[11] For example, the Ministry of Public Works (MOPW) and the Ministry of Forestry (MOFR) need to cooperate with local governments in reconsidering spatial plans to effectively manage forestry, river basin and agricultural land. In addition, in disaster management, it is stipulated that local governments set up Regional Disaster Management Agencies (BPBDs) following the regulations of the Ministry of Home Affairs and the National Disaster Management Agency (BNPB).

However, many of the newly established BPBDs lack technical and financial capacity, and face difficulties in developing regional disaster plans and coordinating stakeholders. Hence, it is necessary for financial and technical support to be provided under the coordination of relevant ministries and agencies.

- To promote dialogue, coordination and cooperation among the recipient country's government agencies and local governments; and
- To promote coordination between the recipient country's government and donor agencies and among donor agencies.

Secondly, international dialogues on climate change have focused on NAMA formulation and MRV systems, since they would play an essential role for developing countries to secure international assistance. In this context, an international cooperation program could support the developing country to lay the foundation of climate change policies with more support from international society when it is designed:

- To provide holistic support including monitoring and reporting of attainment degrees as well as policy planning/implementation.

A program loan satisfies these conditions. Since the Paris Declaration on Aid Effectiveness (OECD, 2005), program loans have been recognized as one of the most favorable forms of international cooperation for a number of reasons: they promote better coordination of projects and programs; they emphasize the ownership of developing countries; and they effectively address upstream policy reforms.[12] Under such circumstances, the GOJ has also aimed to enforce more program-based assistance at the same time with project assistance to meet the development needs of recipient countries.

Under a program loan, financial support is decided based on its prospective impacts as well as the future direction of policy, organizational and institutional reforms in the recipient country. Additionally, the policy dialogues/coordination incorporated in a program loan could be utilized to ensure the effectiveness and sustainability of institutional reforms and on-the-ground activities. Moreover, monitoring results could be a valuable source in considering additional technical/financial cooperation.

In the case of the CCPL, the policy actions/targets prioritized by the GOI were summarized in the Policy Matrix table. The progress/attainments of yearly targets/actions were periodically monitored. Barriers to the progress of policy actions and potential measures for improvement were also identified. The development of the Policy Matrix and the monitoring activities aimed to generate two impacts, namely: (1) to support coordinating agencies (i.e., BAPPENAS, MOF and others); and (2) to promote coordination between the central and local governments toward improving the allocation of resources necessary for policy implementation.

[12] OECD (2005). *Paris Declaration on Aid Effectiveness.* http://www.oecd.org/dac/aideffectiveness/36477834.pdf. (Accessed December 12, 2012.)

Additionally, coordination of the international cooperation process is no less essential than coordination within the government. Thus, the CCPL aimed to increase the opportunities for dialogues among the recipient government and development partners toward optimizing resource allocation and sharing knowledge and experiences. Regarding these objectives, policy dialogues were designed at multiple levels of the steering committees; the technical committees; and sector dialogues. The steering committees invited vice-minister or director-general class officers of the ministries and development partners, while the technical committees invited director-level officers of the GOI ministries and the CCPL advisory/monitoring team.

The mandates of the Steering Committee (SC) and the Technical Committee/Technical Task Force Meeting (TTM) for the CCPL are defined by BAPPENAS's ministerial decree No. 203/2008 as follows:

Mandates of CCPL Steering Committee:

- Direct the policy for the implementation of the Policy Matrix;
- Provide overall coordination for the monitoring of Policy Matrix implementation;
- Approve the monitoring results;
- Coordinate confirmation of Policy Matrix implementation with the donors; and
- Report monitoring results to the State Minister of Development Planning/Chief of BAPPENAS.

Mandates of CCPL Technical Committee:

- Develop schedule and work plan;
- Oversee technical coordination for monitoring of Policy Matrix;
- Provide recommendations to steering committee on problems found during monitoring of Policy Matrix implementation; and
- Report monitoring results to steering committee.[13]

It was expected that the dialogues noted above would provide opportunities for the GOI and the development partners to have intensive discussions on adequate targets related to certain issues, the progress/attainments of policy actions/targets, the barriers/challenges facing them, and potential measures to overcome these barriers/challenges. The CCPL process, consisting of the Policy Matrix, the monitoring activities and the policy dialogues, if it functioned well, was expected to contribute to the mainstreaming of climate change issues in the overall development agenda in Indonesia. At the same time, the monitoring activities and the policy dialogues were also expected to produce results in the form of additional cooperation projects on climate change issues beyond the CCPL.

[13] BAPPENAS, ministerial decree No. 203/2008.

Taking into account the above-described objectives, it can be concluded that it was relevant for the GOJ to support the GOI's climate change policies in the form of a program loan.

On the other hand, the evaluation team should also point out that there have been negative opinions among the GOI ministries on accepting international cooperation on climate change issues in the form of a program loan. In the international climate negotiations, Indonesia was the chair country of the G77 group, which has taken the position that international cooperation on climate change should be in the form of grants, instead of loans. Some of the GOI ministries, particularly those actively involved in the international negotiations, have also taken such positions. Additionally, the merits to be involved in the program loan scheme on climate change issues were not as tangible as those in cases of project based loans, since the funds provided under the CCPL were integrated into the GOI's general budget. As such, the line ministries did not perceive any direct support for either their climate change programs or for any of the actions stated in the Policy Matrix. Nonetheless, the line ministries were asked to cooperate in the monitoring activities and to be present at the policy dialogues.

BAPPENAS, in consultation with JICA, invited the line ministries to submit requests for technical assistance related to climate change in order to provide them with incentives. This has ultimately resulted in a large JICA technical assistance project,[14] which has further enhanced the relevance of the CCPL. We should, however, note that the CCPL was not necessarily favorably accepted by the stakeholders on the recipient side, at least in its initial stage.

c) Relevance of the Policy Matrix

As was mentioned above, the progress of each year's policy actions summarized in the Policy Matrix was monitored, and policy dialogues were conducted based on the monitoring results to discuss additional required policies and further cooperation projects in relevant sectors. The GOI and the development partners used the Policy Matrix as an important tool for sharing progress/attainments and obstacles/challenges for the policy actions.

Sectors covered in the Policy Matrix were selected based on dialogues between BAPPENAS and the line ministries, based on the national priorities specified in the key policy documents such as *the Yellow Book*, *the National Medium-Term Development Plan* and *the ICCSR*. We can see the sectors or issues prioritized by the GOI from the key policy documents issued (or to be

[14] Project of Capacity Development for Climate Change Strategies in Indonesia, consisting of three sub-projects:
1. Project of Low Carbon Development Strategy;
2. Capacity Development for Vulnerability Assessment; and
3. Capacity Development for Developing National GHG Inventories.

issued), as follows:

Table 2-3: Sectors covered in the GOI's key documents on climate change issues

Sectors	*Yellow Book*		*SNC*		*ICCSR*		*RAN-GRK*	*RAN-API*
	Mitigation	Adaptation	Mitigation	Adaptation	Mitigation	Adaptation	Mitigation	Adaptation
Land use/Forestry	✔	✔	✔	✔	✔	✔	✔	✔
Energy	✔	✔	✔		✔		✔	
Industry	✔	✔	✔		✔		✔	
Mining	✔						✔	
Transport	✔	✔	✔		✔		✔	
Waste Management	✔		✔		✔		✔	
Infrastructure	✔	✔	✔					
Water resource	✔	✔		✔	✔	✔		✔
Agriculture/livestock industry	✔	✔		✔	✔	✔	✔	✔
Marine/Coral/Islands/Fisheries	✔	✔		✔		✔		✔
Disaster/Abnormal weather				✔				✔
Health		✔		✔		✔		✔

RAN-API, National Action Plan on Climate Change Adaptation

All of the documents identified the sectors LULUCF, energy (including industry), transportation and waste management for mitigation, and LULUCF, water resources, agriculture, marine, coral, islands and fishery, and health for adaptation.

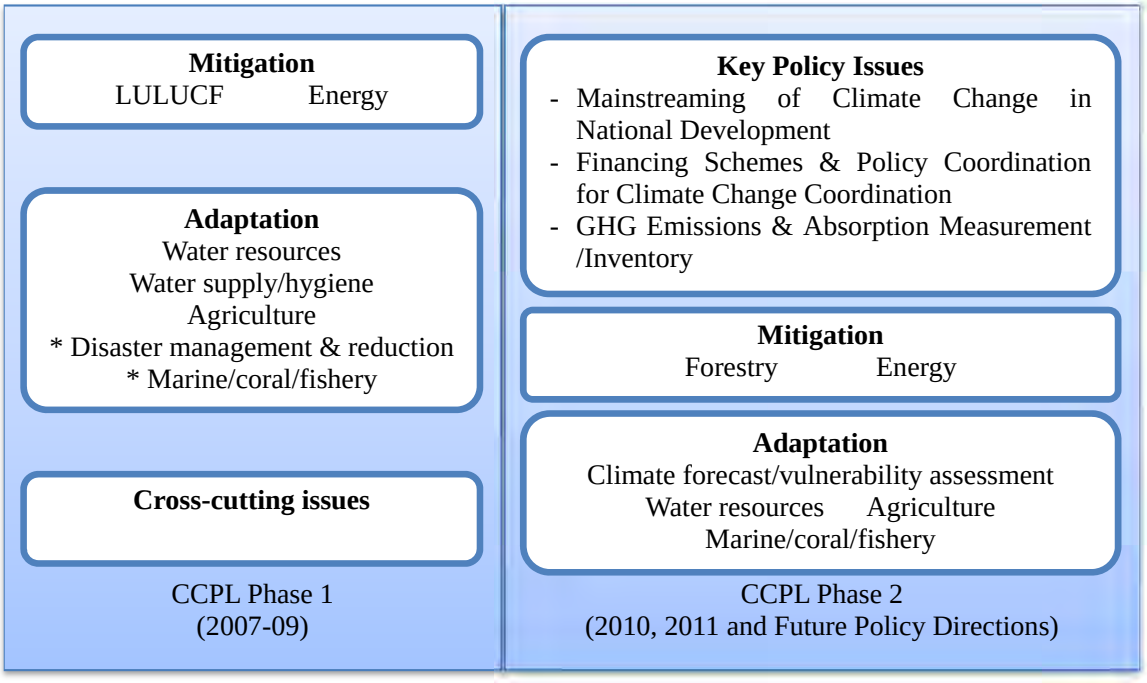
The CCPL Policy Matrix, covering four of the above sectors, namely, LULUCF, energy, transportation and adaptation, appropriately corresponded to the GOI's concerns.

Furthermore, all of the key documents commonly address the importance of cross-cutting issues such as: institutional reforms to mainstream climate change issues in the national development policy; improving the financing mechanisms; and understanding the impact of climate change as the foundation to enable and promote policy actions in each sector.

The GOI and the development partners took note of the importance of such foundations while preparing the Policy Matrix for beyond 2010. Therefore, they agreed to place more emphasis on the "upstream policies" focusing on establishing such foundations, particularly in three outcome areas: (1) Mainstreaming of Climate Change in National Development Program; (2) Financing

Scheme and Policy Coordination for Climate Change Coordination; and (3) GHG Emissions and Absorption Measurement/Inventory. These three outcome areas were placed at the top of the new Policy Matrix. This revision reflects the common understandings on the key challenges shared through the monitoring activities and the policy dialogues conducted during CCPL Phase 1, such as the necessity to prepare NAMA/MRV systems as well as providing further support to local governments. The Policy Matrix for CCPL Phase 2 became more relevant by reflecting the update conditions and needs that were identified.

Figure 2-2: Sectors covered by Policy Matrixes of CCPL Phases 1 & 2



*Disaster management & reduction sector and Marine, Coral and Fishery sector were included in the Policy Matrix from CY2009.

Note, however, that some of the issues prioritized in the GOI's key documents were not included in the policy goals of the CCPL. For example, mitigation actions in the agriculture sector and adaptation policies in the health sector were not included in a Policy Matrix during the entire CCPL period.[15]

Additionally, while the actions/targets included in the policy matrix were carefully selected from

[15] According to the JBIC (current JICA) staff involved in the preparation of the CCPL Phase I Policy Matrix, the agriculture sector as mitigation was not included because its mitigation impact was less significant compared with the forestry and energy sectors and the GOI was still at an early stage of its policy development in this area. The reason for non-inclusion of health sector as adaptation was that water and sanitation sectors were given higher priority. In both cases, JICA wished to limit the numbers of the Policy Matrix sectors and the relative priority was given to the mitigation.

the medium-term development plan and annual action plans and to be consistent with the implementation program reported from the line ministries, those with high degree of probability for attainment, or even those having been already completed tended to be included in some sectors. The timing of policy matrix development could be carefully determined to avoid such problems.

2.3. Effectiveness

This section focuses on the three questions for analyzing the effectiveness of the CCPL in supporting the mainstreaming of climate change issues in Indonesia's development policy. These questions are:

1) Whether the CCPL's budget support removed or mitigated the burdens for the GOI to carry out the necessary reforms to mainstream climate change issues;
2) Whether the CCPL process, namely, the Policy Matrix, the monitoring activities and the policy dialogues, contributed to the GOI carrying out these reforms; and
3) Whether the outcome targets specified in the Policy Matrix, as well as the targets as of 2012/2014 agreed by the GOI and the GOJ, were attained.

a) Effectiveness of the CCPL as a general budget support

For several years Indonesia attained growth of around 6 to 7% of GDP (except for 2009, the year in which the global financial crisis slowed down the world economy). The GOI has introduced various policies to maintain the growth rate, including its fuel subsidies to mitigate rises in the Consumer Price Index (CPI) that would accompany fuel price hikes, and thereby to prevent a downturn in consumption. However, this system of subsidies has been recognized as one of the major reasons for continuous fiscal deficits as the oil price has surged.[16] In fact, Indonesia has continuously faced fiscal deficits for five years since 2007.[17]

[16] Mitsui Sumitomo Trust Bank (2012). *Monthly Report May 2012.* http://www.smtb.jp/others/report/economy/1.pdf. (Accessed December 21, 2012.)
[17] AFD (2010). *AFD and the Climate Change Program Loan (CCPL).* http://www.afd.fr/webdav/site/afd/shared/PORTAILS/PAYS/INDONESIE/Fiche_AFD_CCPL_eng.pdf. (Accessed December 18, 2012.)

Figure 2-3: GOI's fiscal balance (2005-2011)

Source: International Monetary Fund (2012). *World Economic Outlook Database*, October 2012.

Under the CCPL scheme, the development partners have disbursed a total of 2,000 million USD to mitigate the GOI's general budget deficit (see the tables below).[18]

Table 2-4: The outline of the CCPL ODA loan contract concluded between GOJ and GOI

	Climate Change Program Loan	Climate Change Program Loan (II)		Climate Change Program Loan (III)
		Climate Change Program ODA Loan	Emergency Budget Support ODA Loan	
Total amount (yen)	30,768,000,000	28,083,000,000	9,361,000,000	27,195,000,000
Conclusion date of ODA loan contract	02/09/2008	10/12/2009		23/06/2010
Annual interest rate (%)	0.15	0.15	(yen) LIBOR (6month)	0.15
Repayment period/ Grace period (year)	15/5	15/5	15/3	15/5

Table 2-5: Disbursement amounts by development partners

Organizations	**2008**	**2009**	**2010**	**Total**
JICA	300	400	300	1,000
AFD	200	300	300	800
World Bank	-	-	200	200
Total	500	700	800	2,000

(Unit: million USD) *JICA's figure for 2009 includes an Emergency Budget Support ODA Loan

[18] Ibid.

As shown in the table below, compared with the size of domestic financing, government securities in particular, the amount of CCPL as budget deficit financing was much smaller. CCPL finance, however, amounting about 16 to 28% of program loan disbursements between 2008 and 2010 and being relatively cheap and long term loan, probably helped partially to stabilize the currency (through better debt management) and, ultimately, the economy (with reduced inflation and more stable development).

Table 2-6: Fiscal Revenue and Expenditure 2007-2012 (billion IDR)

	2007 Actual	2008 Actual	2009 Actual	2010 Actual
Revenues and Grants	**707.8**	**981.6**	**848.8**	**995.3**
Tax Revenues	491.0	658.7	619.9	723.3
Non Tax Revenues	215.1	320.6	227.2	268.9
Grants	1.7	2.3	1.7	3.0
Expenditures	**757.6**	**985.7**	**937.4**	**1,042.0**
Central Government Expenditures	504.6	693.4	628.8	697.3
Transfer to Regions	253.3	292.4	308.6	344.7
Primary Balance	30.0	84.3	5.2	41.6
Surplus/Deficit	**-49.8**	**-4.1**	**-88.6**	**-46.8**
Finance	**42.5**	**84.1**	**112.6**	**91.6**
Domestic Financing	69.0	102.5	128.1	96.1
Domestic Bank Financing	11.1	16.2	41.0	22.2
Non-Bank Financing	57.9	86.3	87.1	73.9
Of which Government Securities	57.2	85.9	99.5	91.1
Foreign Financing (net)	-26.6	-18.4	15.5	-4.6
Program Loan	19.6	30.1	28.9	29.0
(of which CCPL)	-	**4.8**	**7.2**	**8.0**
Project Loan	14.5	20.1	29.7	25.8
Subsidiary Loan	-2.7	-5.2	-6.2	-8.7
Amortization	-57.9	-63.4	-68.0	-50.6
Surplus/(Deficit) Financing	**-7.4**	**80.0**	**24.0**	**44.7**

Source: AFD/JICA, "Republic of Indonesia, Climate Change Program Loan 2008-2010. Ex-Post Evaluation (Draft) Final Report" December 2012[19]

We can conclude that it at least partially mitigated the GOI's budget constraints during the years from 2008 to 2010. However, compared to the huge volume of the GOI's fiscal deficit during the years from 2009 to 2011,[20] the CCPL's contribution was limited.

It would then also be desirable to examine whether the CCPL's budget support mitigated the burdens of the GOI in carrying out its reforms and policy actions to mainstream climate change

[19] The CCPL figures converted using following exchange rates were inserted.
Exchange Rate: 2008: 1 US D=0.000104 IDR; 2009: 1 USD$=0.000097 IDR; 2010: 1 US D=0.000110 IDR
(http://www.ozforex.com.au/forex-tools/hisotorical-rate-tools/yearly-average-rates accessed March 18. 2013).

[20] Note that the budget support under the CCPL has been disbursed in the middle to the end of each year.

issues. However, it is impossible to give a clear answer to this question: being a general budget support, how the money provided under the CCPL scheme is used cannot be tracked, for instance, to determine whether it was spent on the policy actions specified in the Policy Matrix. Therefore, the study team has put more effort into analyzing the effectiveness of the CCPL in terms of other aspects.

b) Effectiveness of the CCPL process

In this section we will examine whether the CCPL process, consisting of the Policy Matrix, the monitoring activities and the policy dialogues, has effectively supported the mainstreaming of climate change issues in Indonesia. We will look back on the experiences of the stakeholders involved in and/or committed to the monitoring activities and the policy dialogues in particular, to analyze how these opportunities were (or were not) utilized to identify actions relevant to carrying out the necessary reforms for mainstreaming climate change issues and the challenges/obstacles to policy implementation, and to explore potential issues for further cooperation.

◆ **The CCPL's contribution to the improvement of intra- and inter-ministerial coordination**

BAPPENAS and the line ministries had more opportunities to discuss climate change issues while they carried out the monitoring activities and prepared and convened the technical committees and the steering committees. BAPPENAS played a leading role in involving the relevant ministries in the dialogues, including the technical committees, where the participants deepened debate on cross-cutting issues requiring the close coordination of the government ministries/agencies. The following table summarizes some of the major issues highlighted in the CCPL technical committees.

Table 2-7: Some main topics highlighted in discussions at TTMs

Date	Major issues	Major participants
November 5, 2008	- Establishment of the CCPL technical committee was approved. - The progress/attainments of 2008 policy actions/targets were confirmed.	BAPPENAS; line ministries; JICA; and AFD
January 29, 2009	- Summaries of the progress, attainments and challenges particularly in the sectors of Forestry and Agriculture were reported by the monitoring team and confirmed by the GOI ministries. - The progress of development of *the SNC* was reported.	BAPPENAS; line ministries; JICA; and AFD
April 8, 2009	- Status of the progress/attainments of the policy actions/targets was updated. - Status of the newly developed/issued decrees and regulations was shared.	BAPPENAS; line ministries; JICA; and AFD
February 18, 2010	- 2009 monitoring results were approved. - Potential for additional technical cooperation projects was discussed. The revision of the Policy Matrix for CCPL Phase 2 (2010, 2011 and Future Policy Directions) was begun.	BAPPENAS; line ministries; JICA; AFD; and WB
June 6, 2011	- 2010 monitoring results were approved. - The 2011 policy actions as well as future policy directions beyond 2012 were discussed. As a result, the Policy Matrix covered the issuance of *the Presidential Regulation on RAN-GRK*.	BAPPENAS; line ministries; JICA; AFD; WB; and ADB
October 17, 2012	- 2011 monitoring results as well as the status/prospects of the actions beyond 2012 were confirmed. - Follow-up actions for each sector were discussed.	BAPPENAS; line ministries; JICA; AFD; WB; and ADB

Besides the technical committees, BAPPENAS and other coordinating ministries had close dialogues within and among government agencies, as well as with the private sector and local governments, while they worked on the laws and regulations related to climate change policies. The government ministries/agencies and the local governments utilized the occasions of such consultations/dialogues to share their experiences and knowledge and improve cross-organizational coordination to smoothly carry out policy actions.

Occasions for stakeholders to improve coordination were not limited to those embedded in the CCPL, namely, the SCs and TTMs; in fact, dialogues/consultations were occasionally held apart from the CCPL committees. Naturally, the impacts generated from the improved coordination among the stakeholders exceed the outcome targets set in the CCPL Policy Matrix. We will further examine such broader impacts in sections below.

At any rate, it can be seen that the CCPL contributed to improving coordination/cooperation among BAPPENAS and other relevant ministries as well as within the ministries.

◆ **The CCPL's contribution to improving coordination between the GOI and development partners**

Discussions were held at TTMs and SCs in relation to monitoring results, progress, challenges and measures to be taken on policy issues.

For these dialogues, the SCs fulfilled most of the expected functions described in BAPPENAS ministerial decree No. 203/2008 (see pages 21 of this report). In particular, coordination of monitoring activities, approval of monitoring results and coordination with donors upon confirmation of Policy Matrix implementation were successfully carried out in five SCs during ICCPL Phase 1. With regard to the function of directing policy for the implementation of the Policy Matrix, it is noteworthy that there were intensive discussions of issues relating to the LULUCF sector, namely, GERHAN (National Movement on Forest and Land Rehabilitation, Gerakan Nasional Rehabilitasi Hutan dan Lahan in Indonesian) or forest rehabilitation and watershed management, and of those relating to the energy sector, namely, the feed-in-tariff mechanism for geothermal energy.

The steering committee meetings during the CCPL Phase 2 period brought up the issue of measures to support capacity development for local governments to plan and implement climate change policies. They also raised the issue of further coordination between the CCPL and other international cooperation programs, including the ICCPL and other cooperation projects, on the activities related to the implementation of the Masterplan for Enhancement and Acceleration of Economic Development (MP3EI). The GOI agencies and the development partners gained deeper understandings of these issues, and thus made substantial progress, including: the acceleration of establishing Forest Management Units (FMUs); the preparation of incentive schemes mainly to provide financial support to local governments; the development of an action plan as well as a revision of the Standard Operation Procedure (SOP) for the Indonesia Climate Change Trust Fund (ICCTF); and the decision to conduct environmental assessments in implementing the MP3EI. Furthermore, high-level dialogues were held at the occasions of SCs between the executive policy advisor[21] delegated by JICA and relevant GOI ministers. These dialogues also facilitated discussions on the challenges of climate change issues as well as further opportunities of cooperation, and enhanced ownership among GOI's ministries.

Unlike SCs, TTMs could not fulfill their expected functions except that of reporting monitoring results to the steering committee. Developing schedules and work plans, technical coordination

[21] Prof. Hironori Hamanaka, the chair of the board of directors of IGES were designated the Head of the Monitoring and Advisory team (during CCPL Phase 1) / the chair of the Domestic Support Committee (during CCPL Phase 2) and were delegated to hold high-level dialogues.

for monitoring, and providing recommendations to SCs were rarely executed by TTMs during CCPL Phase 1 in particular. This was due to insufficient understanding of the CCPL mechanism among the line ministries.

BAPPENAS, in consultation with JICA and the monitoring support team, tried to improve the functions of TTMs during CCPL Phase 2 by, for instance, providing the agenda with the invitation letters to each ministry/agency in advance of convening TTMs. Line ministries also showed more positive attitudes toward the TTMs and provided the committees with their own requests and proposals including the agenda for the meetings and ideas for policy actions/targets to be included in the Policy Matrix, as well as reporting the progress of the actions. Consequentially, TTMs have become able to effectively play their originally intended functions.

◆ **The CCPL's contribution to improving coordination among development partners**

Coordination among the development partners has also improved. JICA and AFD actively shared information though the joint implementation of monitoring, especially of the mitigation sectors.

Particularly in the forestry sector, JICA and AFD worked closely on the design, data gathering, analysis and reporting of the impacts and mechanism reviews of GERHAN as well as on strengthening forest management and governance.

From 2010, the World Bank also joined the discussions to prepare the revision of the Policy Matrix for 2010 and beyond, since it intended to participate in CCPL Phase 2 as another donor agency. JICA and AFD shared the progress of policy actions during CCPL Phase 1 with the World Bank for that purpose.

◆ **The monitoring activities during CCPL Phase 1 and the challenges they faced**

BAPPENAS, JICA and AFD jointly established a monitoring mechanism for the CCPL. Monitoring activities have been coordinated among BAPPENAS and the line ministries through correspondence, individual meetings, TTMs and SCs. BAPPENAS and the development partners organized external experts into the Advisory and Monitoring team (A&M team) with the intention of enabling advisory and monitoring activities based on a high level of expertise and on a neutral and impartial basis. The monitoring team consisted of experts from GG21, IGES and Fisheries and Aquaculture International Co.,Ltd.[22]; it collected information on the progress, attainments and challenges of policy actions in light of the Policy Matrix, with the

[22] An expert from Fisheries and Aquaculture International Co.,Ltd. joined the A&M team during CCPL Phase 1.

support of BAPPENAS as well as the line ministries and local experts. Monitoring was assisted by a close working relationship among BAPPENAS, JICA, AFD and the monitoring team. The team collected information from official and unofficial documents provided by the line ministries, and through interviews with government officials in charge of the specific policy actions. Additionally, JICA experts working at relevant line ministries such as BMKG, MEMR, MMAF, MOA, MOE, MOFR, MOPW as well as the local experts with abundant experience of working with the government organizations were of great assistance to the monitoring team in making contact with relevant counterparts at the relevant ministries/agencies and obtaining detailed information without causing trouble of the government officials. Based on the information it collected, the monitoring team analyzed progress, attainments, obstacles and challenges, and reported the results to the SCs together with policy recommendations on measures to overcome obstacles and for potential cooperation projects. Thus, the monitoring activities served as the basis of discussions at SCs.

However, despite these achievements, there was room for improving the monitoring mechanism. Challenges were identified particularly at the initial stage of the program. Firstly, regular monitoring activities and TTMs could not gain sufficient commitment from the line ministries due to their having a limited understanding of the objectives and the framework of the CCPL. The monitoring team also faced difficulty in collecting the latest information: the team was composed of external experts, and thus their studies depended largely on study missions to Jakarta. The GOI ministries could not share the details of policies and regulations, which are under development all the time. Later on, while they were not on their missions, the monitoring team entrusted information gathering to local experts including professors and researchers working at universities and local research companies. This made their data collection more effective.

In some cases, 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 that their progress/attainments should be monitored and reported to the SCs. They were also confused and bothered by the overlap in the monitoring activities conducted by several groups of development partners, including the CCPL, all requesting similar information. Such unnecessary burdens and confusion could have been minimized with better coordination and communication among 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 financial resources directly through the scheme, and thus the benefit was less tangible compared to project assistance. It was natural for them to find it a heavy burden to be repeatedly requested to provide information and to

attend meetings. To encourage more positive participation in the monitoring activities, more tangible merits for the line ministries should have been designed from the initial stage of the program, and delivered through the occasions of the monitoring activities and the policy dialogues throughout the program period. In fact, during each of the TTMs, BAPPENAS repeatedly informed line ministries that JICA technical assistance (TA) was available for solving bottlenecks in implementing CCPL policy actions. Not very many requests for such TA, however, were made by line ministries, and a few TA requests did not materialize due to a mismatch of TA processing schedules between Japan and GOI.

◆ **Improvement of monitoring activities during CCPL Phase 2**

Prior to the launch of CCPL Phase 2, the GOI and JICA redesigned the monitoring system. The highlights of the redesign include: (1) the officers of the Japanese embassy and the resident JICA staff and JICA experts assigned to the line ministries organized an ODA task force to regularly collect information; and (2) the former monitoring team was reorganized as a monitoring support team to provide technical support to the latter task force.

Due to this redesign, it became possible to obtain more frequent updates on the implementation status of policy actions regardless of mission periods. In addition, the activities of the monitoring support team were no longer limited to information gathering: they became able to provide technical/professional support for developing climate change policies to BAPPENAS and other ministries. For example, the team supported BAPPENAS in organizing the TTMs and SCs by developing the invitation letters and agendas as well as the conference materials.

The increased opportunities for the monitoring support team to exchange knowledge and/or experiences with the GOI's officials also contributed to the development and implementation of climate change policies. The GOI officials and the monitoring support team could identify the barriers for climate change policies, as well as the need for additional technical cooperation projects (also see section 2.4).

◆ **The challenges of the CCPL Phase 2 monitoring system**

Unfortunately some of the challenges of the monitoring activities, particularly those related to target-setting and verification of results, were not completely overcome even in CCPL Phase 2.

Firstly, the targets were not clear enough to enable the pursuit of a well-organized manner of collecting information, analyzing and verifying attainments, and specifying obstacles. Insufficient clarity in target-setting, including anticipated outcomes and policy actions described in the Policy Matrix, as well as inadequate means of monitoring progress and attainment levels caused serious confusion among the stakeholders. Secondly, some of the targets did not properly

reflect feasibility issues: some of the targets/actions had already been abandoned or postponed by the implementation agency when they were stated in the Policy Matrix.

Although such problems had been pointed out, the Policy Matrix in CCPL Phase 2 also included some targets/actions with unclear attainment indicators and verification methods, or which were not realistic for the implementing ministries/agencies. In particular, the yearly actions set for adaptation measures in the sectors of water resource management, agriculture, and marine and fisheries were not appropriately set to allow clear performance measurement: they lacked clear requirement measures; their linkages to the attainment of outcome (or medium-term) targets were not clear; and some of the policy actions/targets were stated in compound clauses which could have been broken down into multiple performance indicators with little mutual interaction.

We have already argued that the yearly policy targets/actions as well as the outcome targets need to be designed to ensure that their attainments can be monitored, reported and verified at later stages. At minimum, attainment verification measures, as well as the causal linkages between the attainment of an action and its broader outcomes and impacts, are desired to be logically designed at the initial stage.

c) Attainment of the outcome targets/indicators

The Policy Matrix included a number of policy actions/targets toward attaining various outcome area targets. The progress/attainment of these outcome targets can be at least partially ascribed to the CCPL; however we will look into the major progress with/achievements of the outcome targets in the next chapter, on the analysis of contributions at the sectoral level.

In addition, JICA in consultation with BAPPENAS has set eleven indicators in order to measure the outcomes of the policy actions during CCPL Phase 2. Most of the 11 targets were attained by 2012. The progress/attainment for each indicator is as outlined below; this will also be described in the next chapter.

2.4. Impacts and sustainability

In the previous section we analyzed the effectiveness of the CCPL in contributing to the mainstreaming of climate change issues in Indonesia, and to the attainment of the outcome targets specified in the Policy Matrix. In other words, we have looked at the contributions of the CCPL directly related to the CCPL process and the Policy Matrix. Following from the above analysis, the contribution of the CCPL in a broader sense will be examined in this section.

On the one hand, it may be possible to find contributions by the CCPL beyond the scope of

coverage of the CCPL process as well as the Policy Matrix. The aforementioned contribution to effectively supporting the mainstreaming of climate change policies may influence Indonesia's climate policies or development policies in general, or the society as a whole. In some cases, influences might even be found outside Indonesia: on the international debates addressing climate change issues, or on the international cooperation schemes introduced in other countries. We will examine such influences in a broader sense as impacts of the CCPL.

On the other hand, the question of whether the outcomes attained during the CCPL period would be maintained in a sustainable manner can also be asked, and whether the CCPL's contribution to the mainstreaming of climate change policies would persistently influence Indonesia's climate policy development. We will try to answer these questions with a view to evaluating the CCPL's sustainability.

Note, however, that the impacts and sustainability may be difficult to distinguish from one another: on the one hand, some of the impacts would emerge years after the end of the program and thus serve as the basis for sustainability; on the other hand, persistent maintenance of the targets attained during the program period would trigger the generation of further impacts. Therefore, the impacts and sustainability to be analyzed in this section may overlap with each other.

In what follows we will look at the three aspects of impacts and sustainability in the same order as the previous section, as follows: (1) the CCPL's impacts and sustainability as a budget support; (2) the impacts and sustainability of the CCPL process, namely, budget support, stakeholder coordination, policy dialogue for monitoring and matrix development; and (3) the impacts generated by the targets attained during the CCPL period and their sustainability.

a) Impacts/sustainability gained from the CCPL as a budget support

We have seen that the development partners have disbursed 2 billion USD under the CCPL scheme. This has made some contribution to mitigating budget constraints, although it was limited in comparison to the large volume of the GOI's deficit. However, because of the fungibility of CCPL as a budget support, we found it difficult to determine if the funds provided under the CCPL enabled the GOI to carry out the required institutional reforms and on-the-ground activities to mainstream climate change policies during the period from 2008 to 2012. It is even more difficult to figure out whether the fund has contributed to the GOI's climate change policy development after 2012, and/or beyond the sectors/outcome areas of the Policy Matrix.

However, we would venture to say that the experiences of the stakeholders during the CCPL

period may contribute to improving the cost-effectiveness of future climate policies in Indonesia, and thus mitigate budget constraints the GOI may face in the future. The GOI made use of the monitoring activities of the CCPL when it formulated the monitoring systems on the policy actions/targets included in its medium-term development plan as well as *RAN-GRK*. Thus, we can anticipate that the experience of the CCPL has made an indirect contribution to improving the transparency and effectiveness of the GOI's policies. These impacts will be sustainable since they have been embedded to broader GOI monitoring systems on the policy actions/targets included in its medium-term development plan as well as *RAN-GRK*.

b) Impacts/sustainability derived from the CCPL process

◆ **Contribution to climate change policy development in Indonesia**

During the period from 2008 to 2012, the GOI carried out a number of legal and institutional reforms at the national level to mainstream climate change issues in its overall development strategies, and established and/or improved financial schemes and incentive mechanisms to promote climate policies at various levels. At the same time, progress was observed on the development of action plans addressing mitigation as well as institutional reforms at the local level. The GOI has worked on the above issues in close cooperation with international development partners including those who participated in the CCPL. Therefore, the CCPL, as one of the major cooperation schemes addressing these issues in Indonesia, can be seen to have contributed to the above attainments. The following initiatives can be highlighted as being evidence of the mainstreaming of climate change issues in the GOI's ministries and agencies.

Table 2-8: Highlights of establishment/reorganization of agencies and institutions concerning climate change issues

	Establishment/reorganization	Related agencies
2008	The National Council on Climate Change (DNPI) was established.	DNPI
	The Agency for Meteorology and Geophysics (BMG) was reorganized into the Agency for Meteorology, Climatology and Geophysics (BMKG).	BMKG
	The Ministry of Agriculture (MOA) established a Climate Change Committee under its Agency for Agricultural Research and Development (AARD).	MOA
2009	ICCTF was established.	BAPPENAS
	The Ministry of Public Works (MOPW) established a Climate Change Working Unit (MAPI).	MOPW
	The Ministry of Energy and Mineral Resources (MEMR) established a Directorate General of New Energy, Renewable Energy and Energy Conservation.	MEMR
2010	A REDD+ Taskforce was established.	UKP4
	MOE reorganized its structure and set climate change issues as one of the main duties of Deputy 3 for the control of environmental degradation and climate change.	MOE

UKP4, Presidential Working Unit for Supervision and Management of Development

Further impacts are being, and could be, produced by the above institutions and organizations as they exercise their functions to develop and implement concrete policies required in each sector.

Such attainments can also be understood as facts enabling us to deductively infer the CCPL's impacts and as long as these institutions will be maintained, the sustainability of CCPL impacts in the broad term will be ensured.

◆ **Impacts generated from the improved coordination/information sharing among ministries, local governments and the private sector**

We have seen that the CCPL's monitoring activities and policy dialogues contributed to the improvement of stakeholder coordination and information sharing. At the same time we should also point out that BAPPENAS and other ministries/agencies have worked on their own initiatives to increase the opportunities for dialogues to enhance coordination and cooperation, in addition to those embedded in the CCPL process.

Table 2-9 shows highlights of the topics at intra- or inter-ministry dialogues initiated by BAPPENAS and other ministries while they prepared laws and/or action plans on climate change issues. Some of these dialogues also involved the private sector and researchers.

Table 2-9: Highlights of laws/action plans developed out of intra- or inter-ministry dialogues

	Major topics	Major participants
2008-2009	Development of *the ICCSR*	BAPPENAS, line ministries, researchers, private companies
2008-2009	Mainstreaming of climate change issues in the medium-term National Development Plan (RPJMN) 2010-2014 by identifying these issues as one of four cross-sector challenges and one of 13 priorities	Same as above
2009-2010	Development of *RAN-GRK*	Same as above
2011-2012	Development of *RAN-API*	Same as above
2011-2012	Support of the local governments in the development of RAD-GRK	BAPPENAS, JICA, local governments

In addition, the ministries/agencies strengthened information sharing and coordination through the implementation of policies in each sector, as shown in the next table. In many cases, coordination with local organizations was particularly emphasized.

Table 2-10: Highlights of issues discussed/coordinated among ministries

	Major topics	Participants
2008-	Development of River Basin Management Plans and Spatial Plans	BAPPENAS, MOPW, MOFR, NWRC
2008-	Information sharing on System for Rice Intensification (SRI) implementation	MOPW, MOA
2008-	Information sharing on Climate Field School (CFS) operation	DGFC, DGLWM, BMKG
2008-	Development of ministerial decrees and guidelines on the establishment and operation of Forest Management Units	MOFR, MOHA, local governments
2009-	Feasibility study, design and introduction of Performance Based Budgeting (PBB) for climate change policies	BAPPENAS, MOF
2011-	Development of the Peatland Moratorium Map (PIPIB)	MOFR, MOA, UKP4, BPN, BAKOSURTANAL

MOFR, Ministry of Forestry
MOHA, Ministry of Home Affairs
BAKOSURTANAL, National Coordinating Agency for Surveys and Mapping
BPN, National Land Agency

These dialogues and consultation meetings have significantly improved stakeholders' coordination. As one example, MOFR took the initiative in discussions with other ministries related to the definition and regulation of peatland, and reached outstanding results including an agreement on a map of moratorium (or two-year suspension of new concessions) areas to ensure consistency among the regulations prepared by different ministries.

Since the need of improved coordination/information sharing among ministries, local governments and the private sector has been recognized and actually conducted, the process seems to be sustainable

◆ **Coordination between the GOI and development partners/among development partners**

During CCPL Phase 2, the GOI convened a Climate Change Policy Coordination Forum with the aim of enhancing coordination and cooperation with the development partners. Development agencies not involved in the CCPL were also invited to the forum and exchanged their knowledge and opinions, particularly on measures to strengthen coordination among international agencies, and to correct supply-demand imbalances in cooperation projects/programs addressing climate change. The participants provided favorable reviews of the forum, and requested that BAPPENAS continue it after the CCPL period at the 8th SC.

The monitoring support team also contributed to the improvement of mutual understanding and information sharing among the international development agencies working on climate change issues in Indonesia, by conducting interviews and discussions with those who did not participate in the CCPL, upon BAPPENAS's request.

The coordination between the GOI and development partners will continue including collaboration on climate change issues. The continuation of forum such as the Climate Change Policy Coordination Forum will be subject to the discussion between the GOI and development partners.

◆ **Impacts derived from the monitoring activities and their sustainability**

The monitoring team utilized the opportunity of interviews and meetings with GOI officials and discussed the issues of the challenges observed in the progress of policy actions and effective measures. In this manner the team contributed to the improvement of policies in each sector. In particular, the issues described below were closely discussed.

- In the LULUCF/forestry sector, problems in the GERHAN program were identified through the monitoring activities during CCPL Phase 1. During Phase 2, the monitoring support team mainly held discussions with GOI on issues such as the strengthening of support to sustainable forest management in local governments by, for instance, establishing additional FMUs and improving the Special Allocation Fund (DAK) to allow for flexible usages. The challenges related to the reporting of forest management policies were also shared through the discussions.
- In the energy sector, the monitoring activities highlighted the necessity of introducing a Feed-in-Tariff system and exploration fund scheme to encourage Independent Power Producers (IPPs) to develop geothermal power plants. The GOI and the development partners took notice of this observation by the monitoring team, and consequently carried out a number of institutional development initiatives including MEMR Regulation No.

32/2009 on the Standard Purchase Price of Electricity by PLN (State Electricity Company) from Geothermal Electricity Power Plants, as well as international cooperation projects including studies on risk mitigation measures such as the exploration funds operated by BAPPENAS and KfW.

In addition, the monitoring support team cooperated with BAPPENAS in its activities to support RAD-GRK development in each province in 2012. The team collected information on the international cooperation projects conducted by various development partners and helped BAPPENAS to identify provinces that particularly required support. The team also supported BAPPENAS in convening workshops to promote the smooth formulation of RAD-GRK, to which representatives of the provinces were invited.

Last but not least, the CCPL monitoring modality was reflected in the GOI's *RPJMN* implementation monitoring system. The GOI reflected its experiences during the CCPL Policy Matrix development and monitoring activities in its own monitoring system for the policies specified in *RPJMN*, and introduced the concept of "rewards and punishments" to provide implementing bodies such as national ministries and local governments with better incentives. Thus, the experience of the CCPL could be considered to have indirectly contributed to the improvement of the transparency and effectiveness of the GOI's policies.

These impacts will be sustained and further developed by relevant ministries and agencies in their respective responsible policy areas.

- **The CCPL's impacts as a pioneering cooperation program based on international agreements**

The GOI and development partners have gained valuable lessons from the experiences of the CCPL, namely, the development of the Policy Matrix, the monitoring activities and the policy dialogues in the CCPL process, to be utilized in formulating and implementing future cooperation programs addressing climate change issues based on international agreements.

The Bali Action Plan as well as the Copenhagen Accord state that international society needs to strengthen financial and technical cooperation in efforts to reduce the GHG emissions of developing countries. Financial schemes to support medium- and long-term policies were discussed at COP18 (2012), where the developed countries were "encouraged" to provide financial support amounting at least to the level of the annual average of the fast-start finance period for 2013-2015.[23] Besides merely increasing the amount of funding, measures to correct

[23] Since the Copenhagen Accord, developed countries have provided more than 33 billion USD to climate change policies in developing countries. The funds provided by the GOJ add up to

imbalances between the development needs of the recipient countries and the provision of financial support have also become hot topics of discussion. Toward this objective, the UNFCCC has developed the NAMA registry system and unveiled its prototype at the 36th UNFCCC Subsidiary Body Conference (SB36, Bonn) in May 2012.

The registry system is expected to improve transparency in cooperation schemes addressing mitigation by enabling easier access to information on NAMA development and MRV systems in Non-Annex 1 countries. By means of registering NAMAs and clarifying their systems for monitoring, reporting and verifying mitigation actions, developing countries can more easily secure international funds for medium- and long-term mitigation policies.

However, the registry system alone does not ensure the smooth implementation of the whole process including NAMA development and registration, provision of funds, implementation of actions, and monitoring, reporting and verification. Close cooperation among ministries and local bodies in the recipient country as well as among the development partner agencies is strongly desired, beginning at the preparation stage of the project/program, so that the stakeholders could share information, discuss the expected outputs and impacts of the policies, and develop clear methods for monitoring and verification.

The CCPL provided the GOI with fruitful lessons related to the above-mentioned issues: BAPPENAS used the experiences of the monitoring activities in developing an MRV system for the actions specified in *RAN-GRK* and Regional Action Plans on Green House Gas Emissions Reduction (RAD-GRK); moreover, the lessons learned could also be applied to fundraising through the NAMA registry system and MRV in other developing countries. Toward this end, the authors anticipate that various stakeholders involved in the CCPL would look back on the attainments as well as challenges of the program from their own standpoints.

◆ **Cooperation programs/projects derived from the CCPL**

It is necessary to mention the cooperation programs and projects designed and introduced from the monitoring activities and/or policy dialogues as further impacts that have been or could be generated by the CCPL. Above all, JICA's Project of Capacity Development for Climate Change Strategies in Indonesia (2010 to 2015) would create a wide range of impacts on climate change policies in Indonesia by directly supporting the development of the action plans, the execution

13.3 billion USD, accounting for 40% of the total amount. Sources: Ministry of Foreign Affairs, Japan (2012). *UNFCCC COP18: Outline and Evaluation of the 8th Meeting of the Parties to the Kyoto Protocol CMP8*. http://www.mofa.go.jp/mofaj/gaiko/kankyo/kiko/cop18/gh.html.
Japan's Development assistance in the Climate Change sector by the end of 2012. http://www.mofa.go.jp/mofaj/gaiko/kankyo/kiko/pdfs/assistance-to-2012.pdf.
(Accessed December 25, 2012.)

of vulnerability assessments, and the development of the GHG inventory system. The project was prepared as a result of the needs assessment during CCPL Phase 1, which also involved the monitoring team at the time. Even after the launch of the project, the monitoring support team for CCPL Phase 2 cooperated in, for instance, the activities in support of RAD-GRK development under Sub-Project 1. For this reason the project is recognized as the most significant cooperation project derived from and concurrently operated with the CCPL.

Table 2-11: The activities under JICA's Project of Capacity Development for Climate Change Strategies in Indonesia with a close relationship with the CCPL

Sub-Project 1: The Project of Low Carbon Development Strategy Project by Integrating NAMA & Adaptation into National Development Planning	- Support for the mainstreaming of climate change issues into provincial medium-term development plans; - Support for promotion activities on RAD-GRK development; - Support for RAD-GRK development in the provinces of South and North Sumatera and West Kalimantan; and - Expert assistance on the development of the National Adaptation Strategies.
Sub-Project 2: Capacity Development for Vulnerability Assessment	- Technical support for the establishment of systems for: vulnerability studies; climate change forecasting and verification; evaluation of adaptability; and strengthened coordination among stakeholders.
Sub-Project 3: Capacity Development for Developing National GHG Inventories	- Technical support for the preparation of guidance for inventory development (provided particularly to the waste management sector as a test run).

JICA has also cooperated in the revision of the Jabodetabek transportation master plan through its Project of Integrated Urban Transportation Policy launched in July 2009. Under this project JICA provides technical assistance for the GOI's activities, including: the reviews of the Study on Integrated Transportation Master Plan for Jabodetabek (SITRAMP); strengthening of the capacity of the government officers engaged in the development of urban transportation management plans; the conduct of the feasibility studies and trial projects to prepare the revised master plan; and the drafting of the Presidential Regulation. We mention this project despite the fact that it was not derived from the CCPL, since it shows JICA's support for the GOI's efforts on transportation policy reforms provided from two angles: strengthening of the capacity of the implementation agency and its officers through the project assistance; and identifying progress/attainments and challenges through the monitoring activities and the policy dialogues.

Since JICA places high priority on supporting Climate Change programs, further cooperation in this sector can be sustained, subject to the agreement between the GOI and JICA.

c) Impacts of the attainments of outcome area targets and their sustainability

The attainments of the outcome area targets included in the Policy Matrix would generate further impacts on Indonesian society, which could be at least partly ascribed to the CCPL; however, we will look into the major impacts expected in the next chapter, on the analysis of the contribution at the sectoral level.

In addition, the attainments of the eleven outcome goals set by JICA in consultation with BAPPENAS to measure the outcomes of the policy actions during CCPL Phase 2 would also generate further impacts, since most of the 11 targets were attained. Major impacts generated by the attainment of each indicator will also be described in the next chapter.

3. Analysis (2) Evaluation of sectoral policies supported by the CCPL

3.1. Perspective for the evaluation of sectoral policy

CCPL Phase 2 covered the sectors of key policy issues, forestry, energy, transportation and adaptation. These sectors each had two to four outcome target areas, since the policy actions/targets set in a sector often aim to generate different outcomes and impacts in the medium to long term.

Therefore, in what follows we will explore the contribution of the CCPL at the sectoral level, mainly focusing on the outcome levels. What will be examined in this chapter are:

a) The relevance of the policy actions/targets toward the attainment of each outcome target;
b) The effectiveness of implementing the policy actions; and
c) The impacts expected from the attainment of the outcomes, and their sustainability beyond 2012.

As described later, most of the policy actions/targets set in the Policy Matrix were attained as scheduled throughout the period of CCPL phase 1 and 2. However some of actions/targets such as legal development requiring agreement among multiple stakeholders were not attained.

3.2. Key Policy Issues

As mentioned in the previous chapter, BAPPENAS and the development partners decided to set three targets as Key Policy Issues for the CCPL Phase 2 Policy Matrix based on the monitoring results of CCPL Phase 1 and the policy dialogues. This change has contributed to improving the relevance of the policy actions covered in the Policy Matrix, because it reflected the GOI's intentions and the role of the CCPL, which emphasizes the upstream policy formulation.

a) Achievement of the outcome indicators set by BAPPENAS/JICA

In order to measure the outcomes of the policy actions for the Key Policy Issues, JICA, in consultation with BAPPENAS, has set four indicators as follows.

(i) Formulation of a RAD-GRK in 33 provinces;
(ii) Formulation of a comprehensive concept of NAMAs (2014);
(iii) Establishment of an independent MRV agency for REDD+; and
(iv) Establishment of local disaster management agencies in 33 provinces.

The current attainment status of the aforementioned indicators is summarized below.

(i) As of January 2013, a RAD-GRK had been completed in 29 provinces and was being prepared in 4 provinces.

(ii) T*he concept of NAMAs* was prepared and *the RAN-GRK Guideline* was issued based on the concept in 2011. The GOI would prepare NAMAs with further elaboration of the details of the concept of NAMAs.

(iii) Neither an MRV agency nor an agency for REDD+ was established, while the REDD+ Task Force prepared "Mandate and direction of governance of REDD+ Agency (in REDD+ National Strategy)." The mandate of the REDD+ Task force is expected to be extended for continued preparation.

By 2011, 33 Provincial Disaster Management Agencies (BPBDs) had been established.

In this section we intend to examine three policy outcome areas set as Key Policy Issues: (1) mainstreaming climate change in the national development program; (2) financing schemes and policy coordination for climate change; and (3) the GHG emissions and absorption measurement inventory. Since the highlights of progress for the first outcome area, namely, mainstreaming climate change in the national development program, have already been analyzed in the previous section (Chapter 2), this section mainly focuses on the remaining two domains.

b) Relevance of the outcome areas/targets and policy actions/targets

With regard to climate finance, the GOI estimates that an additional annual investment of 4.5 to 5 billion USD is required[24] in order to enforce climate change policy measures while addressing the country's national development goals and Millennium Development Goals (MDGs) at the same time. This large amount of investment should be effectively managed and coordinated in accordance with the Jakarta Commitment.[25] In addition, effective budget allocation and incentive mechanisms are key factors in dealing with the cross-cutting nature of climate change policy and in efficiently implementing climate change policy measures at the sectoral and local levels. The GOI recognizes that "climate change can only be properly addressed by allocating specific funding to the issue."[26] According to MOF study, it suggests that, if expenditure to *RAN-GRK* remains as the current amount with conventional mechanism, only around 15% of the *RAN-GRK* mitigation target can be achieved.[27] Therefore, the country needs to improve current financial mechanism and create new initiatives while ensuring access to international

[24] BAPPENAS (2008). *National Development Planning: Indonesia Responses to Climate Change (Yellow Book)*.

[25] The Jakarta Commitment addresses three pillars: (1) country ownership of development; (2) more effective and inclusive partnerships for development; and (3) delivering and accounting for development results.

[26] BAPPENAS (2008). *National Development Planning: Indonesia Responses to Climate Change (Yellow Book)*, p. 31.

[27] Ministry of Finance (2012). *Indonesia's First Mitigation Fiscal Framework.*

climate finance.

Regarding the above-mentioned requirements of financing scheme development and policy coordination, the CCPL Phase 2 Policy Matrix includes actions related to ICCTF, PBB and an incentive mechanism for climate change policy measures. The latter would provide incentive mechanisms for effectively allocating secured funding towards ministerial or regional climate change policy measures, linked to the achievement status of the target. MOF strongly emphasizes the necessity of establishing a regional incentive mechanism for climate change under the intergovernmental fiscal transfer system to support and incentivize climate change action by regional governments.[28] PBB and DAK are a major part of such initiatives.
In addition, in order to link up with global climate funds such as the Green Climate Fund, establishing capable domestic institutions is a critical step. In this regard, the ICCTF and other relevant financial initiatives are expected to play a significant role in managing and coordinating international funding.

Considering the GOI's needs and the international context of climate finance, the outcome areas and policy actions addressed in the Policy Matrix can be judged as being highly relevant.

The establishment of a GHG emissions and absorption inventory system is an urgent requirement for Indonesia in order to gain an understanding of the current status of GHG emissions and to develop and improve mitigation targets. The GOI's Law No. 32/2009, on environmental protection and management, stipulated the preparation of an environment inventory.

Under the Cancun agreement concluded in 2010 at COP16, biennial reporting/updates of a GHG inventory became mandatory for Non-Annex I countries. The GOI is required to submit its first biennial update report (BUR) in a standard tabular format by December 2014.[29] In addition, GHG inventory development is a significant process for the GOI in view of the future preparation and implementation of MRV for GHG emissions reduction, which is required to ensure access to international climate finance.[30]

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[28] Ministry of Finance, Indonesia (2009). *Ministry of Finance Green Paper: Economic and Fiscal Policy Strategies for Climate Change Mitigation in Indonesia*. Ministry of Finance and Australia Indonesia Partnership, Jakarta.

[29] Global Environment Centre Foundation (2012). *Outline of COP decision and negotiation on new mechanism at COP17*.

[30] GOI states "the establishment of a national GHG inventory and monitoring system is a precondition measure [for] the success of mitigation actions towards achieving the emissions reduction target of 26%" BAPPENAS (2010), p. 145.
BAPPENAS (2010). *Indonesia Climate Change Sectoral Roadmap (ICCSR)*.

Considering its necessity for the GOI and international requirements, it is reasonable to state that it is relevant to set GHG inventory development as one of the Key Policy Issues in the CCPL Policy Matrix, mainly because the inventory system is expected to form the basis for the country's further climate change policy development.

c) Effectiveness of the policy actions/targets toward attaining outcome targets

The major attainments of indicators in CCPL Phase 2 are summarized in the table below.

Table 3-1: Summary of major attainments of indicators for Key Policy Issues during CCPL Phase 2

Mainstreaming Climate Change in the National Development Program
Outcome area: Climate change program is implemented in all related ministries towards the achievement of national target (26% GHG emissions reduction from BAU in 2020)
Highlights of Policy Actions: - *ICCSR* was finalized. (2010) - Based on the concept of NAMA, *Guideline of RAN-GRK* was issued. (2011) - *The Presidential Regulation no 61/2011 on RAN-GRK* was issued. (2011) - RAD-GRK was prepared in 29 provinces. (as of January, 2013) - Indonesian Voluntary Mitigation Action was sent by GOI to UNFCCC in 2010. - The Strategy for Mainstreaming Adaptation into National Development Planning was finalized. (2012)
Financing Scheme and Policy Coordination for Climate Change
Outcome area: Policy coordination on climate change is enhanced and linked to National Budget and Planning processes.
Highlights of Policy Actions: - ICCTF business plan 2011-2020 was prepared. (2011) - SOP for ICCTF was revised. (2011) - PBB was introduced in 2011. - Studies on incentive mechanism were conducted (2011)
GHG Emissions & Absorption Measurement Inventory
Outcome Area: Monitoring mechanism for carbon emissions and absorption is established through National GHG Inventory System.
Highlights of Policy Actions: - Presidential Regulation 71/2011 on National GHG inventory was issued. - For further implementing National GHG inventory, the general guideline of inventory was completed. (2011) The GHG Inventory System (SIGN) unit was established (2010) and SIGN Center was established. (2013)

- ***Financing Scheme and Policy Coordination for Climate Change***

The intended target in this outcome area is for policy coordination on climate change to be enhanced and linked to the national budget and planning processes. The GOI has developed a financing scheme for climate change programs. In this regard, the ICCTF has played a significant role in enhancing policy coordination under the common vision. The development of

the "*ICCTF Business Plan 2011-2020*" and the revision of the SOP were the critical processes in sharing a common vision and implementation procedure among relevant agencies. Along with this progress, project financing has been provided since 2010 for projects of MOA, Ministry of Industry (MOI), BMKG, Ministry of Health (MOH) and MOFR, both on mitigation and adaptation. The progress with ICCTF has provided further encouragement for line ministries to participate in climate change policy measures.

In addition, the institutional arrangement of the ICCTF has provided an important forum to improve coordination among ministries. To provide overall policy guidance and direction, members of the ICCTF Steering Committee on Coordination include ministries and agencies related to climate change. Moreover, it provides an opportunity for interaction between development partners and government ministries/agencies during program implementation. In such a way, the budget and planning processes related to climate change would become more coordinated in a comprehensive manner.

More generally, the GOI developed a funding mechanism policy framework by enacting a Presidential Regulation in 2011 that provides the legal basis for the trust funding mechanism. ICCTF trust fund management was referred to during the development of the trust fund regulation. In addition to the ICCTF, currently the Millennium Challenge Account Indonesia (MCA-Indonesia) also follows the trust fund model in managing its grant fund. MOF has created several funds including a geothermal revolving fund.

The GOI has made progress with incentive mechanisms including legal arrangements and implementation of PBB, and improvement of the incentive mechanism for local governments. After several regulations and rules on PBB including Government Regulation No. 90/2010 were prepared, implementation of PBB began in 2011. Climate change related programs of the line ministries were incorporated into the overall PBB process.

With regard to DAKs, although a policy dialogue was conducted to discuss the feasibility/necessity of a Climate Change DAK (CC-DAK), it was not realized, because climate change programs are highly cross-sectoral and thus it would be difficult to assign a single implementing ministry/agency for a CC-DAK. However, an additional budget of 10 million USD has been allocated to a forestry sector DAK as a CC-DAK with the provision of new technical guidance. In addition to DAKs, the central government is considering a fiscal transfer mechanism to finance RAD-GRK implementation in support of local budgets (APBD). MOF has been drafting a MOF regulation in consultation with other relevant ministries to prepare a grant fund mechanism. According to MOF, a grant fund mechanism is the most feasible mechanism for supporting RAD-GRK implementation by local governments, and it is expected

to start operation in 2013, while the central government assumes that local governments would finance RAD-GRK implementation from local sources as well. The grant fund mechanism is one type of fund allocation from the central to local governments that is mandated by Law No. 33/2004 on Fiscal Balance.

The RAN/RAD-GRK preparation process reinforced securing the state budget for climate mitigation policies, programs and actions. RAN/RAD-GRKs were prepared mainly based on *RPJMN* and RENSTRA (strategic plans), and a provisional budget for implementing RAN/RAD-GRKs was debated and agreed as well. With the preparation of the RAN/RAD-GRKs, the GOI could be considered to have been able to reaffirm allocation of the state budget for the actions specified in *RAN-GRK*, especially that in the current *RPJMN*.
In general, in terms of policy coordination with national budget and planning processes, the GOI advanced its policies to establish a favorable system that provides better budget allocation with climate change policy performance and financing for climate change actions.

- ***GHG Emissions & Absorption Measurement Inventory***

The outcome target of GHG inventory development in the CCPL Policy Matrix is for a monitoring mechanism for carbon emissions and absorption to be established through a national GHG inventory system. In order to achieve this, the GOI, mainly MOE, has advanced framework policies, relevant regulations and rules for a GHG inventory system. In this regard, Presidential Regulation No. 71/2011 on the national GHG inventory was issued in 2011 and guidelines and manuals for implementation have been prepared. *The SNC* was successfully submitted to UNFCCC on February 14, 2011. In addition, the SIGN unit was established in October 2010, and a SIGN Center was set up in January 2013 with the aim of smoothly implementing SIGN. Furthermore, MOE finalized the guidelines (general and sectoral) for the national GHG inventory; MOE also prepared sectoral-based manuals for implementing the guidelines, and further technical guidance for waste sector inventory development as a pilot sector.

The framework of the national GHG inventory system has been advanced during Phase 2 of the CCPL with the support of a JICA capacity building project, while further efforts are anticipated for full implementation of the system.

d) Impacts/sustainability of outcomes

- ***Financing scheme and policy coordination for climate change***

The GOI expended its efforts to enhance the sustainability of the financing scheme. As mentioned above, MOF prepared new government funds including a geothermal revolving fund

by allocating the national budget and preparing institutions and SOPs. The ICCTF has been considering the establishment of a revolving fund, as well as trying to apply for international climate funding such as the Adaptation Fund and Green Climate Fund. For those purposes, ICCTF capacity and performance are expected to be enhanced to meet international standards. Further efforts to ensure sustainability by diversifying ICCTF funding from domestic sources, such as public-private partnerships, corporate social responsibility (CSR) and the carbon market, are anticipated as well. More generally, the GOI enacted a Presidential Regulation in 2011 that provides the legal basis for a trust funding mechanism.

In addition, the RAN/RAD-GRKs are to provide inputs for further mainstreaming climate change issue into the next *RPJMN* and regional medium term development plans (RPJMD) while securing state budget allocations for climate change actions. After the *RAN-API* is finalized, it is expected to implement the mainstreaming of inputs as does the RAN-GRK.

- ***GHG Emissions & Absorption Measurement Inventory***

The GOI has developed framework policies for the national GHG inventory system; following from the Presidential Regulation, operational guidelines were also prepared, MOE created the SIGN Center as a hub for coordinating implementation and is further developing the national GHG inventory by securing a national budget and staff.

The challenge is implementation coordination among relevant ministries. Also, the capacity development of relevant officials and stakeholders including local governments is a key issue, considering Presidential Regulation No. 71/2011, which stipulates the preparation of GHG inventories at the local level.

In the national key documents, the GOI repeatedly stresses the necessity of the national inventory system and MRV system. Therefore, it is anticipated that further international cooperation would be provided in accordance with the GOI's specific needs in order to accelerate the development of the system. In this regard, and keeping sustainability in mind, JICA's technical cooperation project, "Sub-Project for Capacity Development for Developing National GHG Inventories," is expected to be a significant support.

3.3. Mitigation

3.3.1. Forestry

The latest statistics estimate that the total area of terrestrial forest in Indonesia is 131.28 million ha, covering approximately 70% of the country.[31] Although Indonesia has experienced a long history of forest management, the country has undergone considerably high rates of deforestation and forest degradation. It is estimated that between 1990 and 2000, Indonesia lost around 19 million ha, or 18%, of its total forest cover.[32]

Since forest loss including peat fires is considered to be the major contributor (about 60%) to GHG emissions in Indonesia, the forestry sector has become the most important for the GOI's effort to pursue its national target of reducing GHG emissions by 26% (less than BAU by 2020) while sustaining 7% annual growth.

In this context, the GOI is working on climate mitigation in the forestry sector in mainly three areas, as were described in *The Indonesian Voluntary Mitigation Actions* submitted to UNFCCC in 2010: sustainable peatland management; reduction in the rate of deforestation and land degradation; and development of carbon sequestration projects in forestry and agriculture.

CCPL Phase 1 focused on both increasing carbon absorption capacity through reforestation activities and on reducing carbon emissions resulting from logging and land use change, particularly with respect to peatland, through better forest and peatland management and governance. Following the achievements in these outcome areas (for detailed information see the CCPL Phase 1 Evaluation Report), the forestry sector outcomes and indicators included in the CCPL Phase 2 Policy Matrix have focused on: (1) improved forest governance and management; (2) an institutional and regulatory framework to conserve and restore peatland; (3) the national REDD framework; and (4) carbon sink capacity (see Table 3-2).

[31] Ministry of Forestry, Indonesia (2012). *Forestry Statistics of Indonesia 2011*.
[32] FAO (2010). *Global forest resource assessment 2010.* http://www.fao.org/docrep/013/i1757e/i1757e.pdf. (Accessed January 10, 2013.)

Table 3-2: Summary of major attainments of indicators for Forestry sector during CCPL Phase 2

Forest management and governance
Outcome area: Forest governance and management is improved through the establishment of improved rules on FMUs, financial scheme for local governments, and timber legality
Highlights of Policy Actions: - 59 model FMUs have been established at site, along with the development of regulatory framework for FMU in terms of institutions and human resources. - Mechanism of Forestry DAK has been improved regarding areas and activities eligible to be funded, along with issuance of Technical Guidance of Forestry DAK for FY 2012 - Timber legality verification system (SVLK) has been developed to assure timber legality
Peatland conservation
Outcome area: An institutional and regulatory framework to conserve and restore peatland is improved.
Highlights of Policy Actions: - Government Regulation on Lowland and Government regulation on Protection and Management of Peat Ecosystem were prepared, and are currently under policy coordination process. - The map of Peatland Hydrological Unit in Sumatra was produced.
REDD+
Outcome Area: Emissions from deforestation and forest degradation is reduced through the implementation of a national REDD framework.
Highlights of Policy Actions: - Presidential Instruction No. 10/2011 on the moratorium was issued in May 2011 and MOFR has produced a series of the moratorium indicative map (PIPIB in Indonesian). - National Strategy of REDD+ finalized in June 2012 by REDD+ Task Force
Afforestation and reforestation
Outcome Area: Carbon sink capacity is increased through reforestation activities.
Highlights of Policy Actions: - The 100 thousands ha replanting program has been completed and technical design was developed for another 100 thousand ha - A ministerial decree SK.07/Menhut-II/2011 on forest land allocation for timber plantation was issued in January 2011.

a) Achievement of the outcome indicators set by BAPPENAS/JICA

In order to measure the outcomes of the policy actions for the forestry sector during CCPL Phase 2, JICA, in consultation with BAPPENAS, has set two indicators: (1) FMUs (KPH in Indonesian) established in 33 provinces by 2014; and (2) issuance of National Strategy for REDD+ by 2012.

i. As of September 2012, the GOI had established 59 model FMUs in 27 provinces (there were ten KPHs established in nine provinces by 2010).

ii. After a series of consultation meetings and revisions, the National Strategy for REDD+ was finalized in June 2012 by the REDD+ Taskforce, following which the National Strategy was officially recognized by a Decree of the Chairman of the REDD+ Task

Force in September 2012.[33]

b) Relevance of the outcome areas/targets and policy actions/targets

The target outcome areas set up for the forestry sector (see Table 3-3) are consistent with government climate change priorities as set out in *RAN-PI*, which identified three main mechanisms for supporting the mitigation effort in the forestry sector: (1) emissions reduction and increased capacity to absorb carbon; (2) implementation of incentive mechanisms (including REDD); and (3) supportive policies (spatial planning, law enforcement, poverty alleviation, research and development, capacity building, preparation and social engineering). The target policy actions for CCPL Phase 2 are also relevant to six priority policies set in the MOFR's 2010-2014 RENSTRA (see Table 3-3). Furthermore, the establishment of FMUs (KPHs) and improvement of peatland management are strongly supported by both *the ICCSR* for the forestry sector and *the National Strategy of REDD+*.

Table 3-3: The Priority Issues in MOFR's Strategic Plan 2010-2014 and Target Outcomes in the CCPL Policy Matrix (2010, 2011 and future policy direction)

Forest sector priority issues, reiterated in *Strategic Plan of the Ministry of Forestry 2010-2014*	**Target Outcomes in the ICCPL Policy Matrix Phase 2 (2010-11)**
1. Forest area consolidation	- Improving forest governance and management
2. Forest Rehabilitation and Support Capacity Improvement of DAS.	- Increasing carbon sink capacity through reforestation activities
3. Forest safeguard and forest fire control.	- Improving forest governance and management - Reducing emissions from deforestation and forest degradation
4. Biodiversity conservation.	- Improving institutional and regulatory framework to conserve and restore peatland - Reducing emissions from deforestation and forest degradation
5. Forest exploitation and forestry industry revitalization.	- Improving forest governance and management
6. Forest community empowerment.	- Improving forest governance and management

c) Effectiveness of the policy actions/targets toward attaining outcome targets

- ***Forest Management and Governance***

The actions supported by the CCPL Policy Matrix have built important foundations for improving forest governance and management. A particular focus has been made on the

[33] The Decree of Chairman of Task Force for the preparation of REDD+ Agency No.02/SATGAS REDD+/09/2012 on National Strategy of REDD+ Indonesia.

development of FMUs to meet this objective.

The FMU serves as the basic unit for all forest resource management, and all state-designated forest areas in Indonesia are expected to be managed under FMUs. The following table summarizes the progress of FMU establishment from 2009 to 2012.

Table 3-4: Progress in FMU establishment (cumulative number of FMUs)

	Dec. 2009	Sep. 2012
Number of Production and Protection FMU designs completed	23	481
Number of model FMUs established by MOFR's declaration	13	59
Number of FMUs established for conservation forests	10	20

Source: JICA 2010. *CCPL Phase 1Programme Evaluation Report*; MOFR

In addition, CCPL policy actions have supported the establishment of the regulatory framework for FMUs. Principles and rules have been applied in the establishment of FMUs in terms of ecology, socio-economic issues and establishment procedures, as well as institutions and human resources. The following table summarizes the regulations on the establishment and implementation of FMUs.

Table 3-5: Key regulations on FMU development and implementation

Year	Regulation
2009	- MOFR's regulation P.6/Menhut-II/2009 on Establishment of the Area of Forest management unit
2010	- MOFR's regulation P.6/Menhut-II/2010 on Regarding the Norms, Standards, Procedures, and Criteria of Forest Management in the Protection Forest Management Unit (KPHL) and Production Forest Management Unit (KPHP) - Ministry of Home Affairs Regulation P.61/2010 on Organisational Guidelines and Working System of Protected Forest Management Unit and Production Forest Management Unit in Regions
2011	- MOFR's regulation P.41/Menhut-II/2011 on Standards for Facilitation of Equipment and Infrastructure for KPHL-Model and KPHP-Model - MOFR's regulation P.42/Menhut-II/2011 on Competence Standards in the Forestry Sector for KPHL and KPHP - MOFR's regulation P.54/Menhut-II/2011 Amendment on P.41/Menhut-II/2011

- ***Peatland Conservation***

The CCPL Policy Matrix has concentrated on institutional and broader policy considerations for the management of peatland. During CCPL Phase 2, several peatland management activities have been conducted towards the enactment of: (1) a two-year moratorium on new concessions in primary natural forest and peatland areas; (2) the Government Regulation on Lowland; and (3) the Government Regulation on Protection and Management of Peat Ecosystem.

However, the attainment of these actions has been delayed or not fully achieved. After five months of delay, Presidential Instruction No. 10/2011 regarding the moratorium was enacted in May 2011. As of December 2012, two Government Regulations were still undergoing the policy

coordination process within the GOI. This could be largely attributed to the fact that different jurisdictions have different interests over peatland management, involving MOFR, MOA, MOE and MOPW, resulting in the policy-making process becoming complex.

- At the same time, MOE has prepared a map of the Peatland Hydrological Unit in Sumatra and Kalimantan, which would support the implementation of the Government Regulation on Protection and Management of Peat Ecosystem. In July 2012, a Hydrological Unit Map of Sumatra was produced, but a map of Kalimantan is pending due to limited peatland data and technical issues.

- ***REDD+***

The progresses made towards developing Indonesia's REDD+ scheme associated with CCPL Policy Matrix actions include are as follows.

During CCPL Phase 1 (2007-2009):

- 2 MOFR regulations and 1 decree issued to regulate REDD demonstration activities and forest carbon trade;
- 9 demonstration activities approved by MOFR; and
- Readiness Preparation Plan (R-PP) submitted to the World Bank's Forest Carbon Partnership Facility (FCPF).

During CCPL Phase 2 (2010, 2011 and Future Policy Directions):

- Presidential Instruction No. 10/2011 on the moratorium issued in May 2011;
- National Strategy of REDD+ finalized in June 2012 by REDD+ Task Force; and
  Around 10 demonstration activities on REDD+ conducted.

These achievements are strongly related to the development of the REDD+ system at both the national and sub-national levels. Importantly, the National Strategy of REDD+ was finalized in 2012 by the REDD+ Task Force. The Strategy would function as guidelines for the development of sub-national REDD+ action plans and would be mainstreamed into development processes.

In addition, the two-year moratorium was enacted in May 2011 as a partial fulfillment of obligations under a letter of intent with the Government of Norway. Proceeding with the Presidential Instructions, MOFR has produced a series of moratorium indication maps (PIPIB in Indonesian), which illustrate primary natural forest and peatland areas covered under the moratorium.

- ***Afforestation and Reforestation***

The CCPL Policy Matrix actions have supported the GOI's reforestation and forestation initiatives to increase carbon absorption capacity.

In 2003, the GOI launched the Forest and Land Rehabilitation Movement (*Gerakan Nasional Rehabilitasi Hutan dan Lahan* in Indonesian, or GERHAN), under which reforestation activities were performed until 2008 covering an area of 906,969 ha. After the closure of the GERHAN program, the initiative has continued to be one of six priority development policies in the forestry sector set in MOFR's Strategic Plan 2010-2014. Official statistics give the area of rehabilitated and reforested areas from 2009 through 2011 (see Table 3-6).

Table 3-6: Reforestation and Rehabilitation Area

Year	Reforestation (ha)	Rehabilitation (ha)
2009	113,042	89,320
2010	145,102	25,879
2011	151,498	415,611

Source: Forestry Statistics of Indonesia 2011 (MOFR, 2012)
*Note: "Reforestation" indicates rehabilitated areas in state-designated forests. Rehabilitation areas include Hutan Kota (Urban Forest), HR (*Hutan Rakyat*, or Private Forest) and Mangrove Forest

Accordingly, the CCPL target in 2010 of the rehabilitation of 100,000 ha and the development of a technical design for another 100,000 ha have been met. However, the survival rates of tree plantations vary significantly. Under GERHAN, for CY 2003-2004, the rates were around 40% to 86%.[34] This suggests that a longer time period with a proper monitoring system is necessary to assess the contribution of reforestation and rehabilitation activities.

d) Impacts and sustainability of outcome targets

- ***Forest Management and Governance***

The establishment of FMUs is an important step towards implementation of sustainable forest management, and could therefore be viewed as a crucial precondition for all mitigation activities involving forest areas. It is estimated that sustainable forest management could produce 160 $MtCO_2$ per year of average emissions reductions during the period 2010-2019.[35]

Nevertheless, the establishment of FMUs is in an early stage and is not yet fully operational. In order to cover all the stated designated forest areas, at least 600 FMUs are required. As of September 2012, the GOI had established 59 FMUs as models (of which 56 FMUs have organizations, 49 units have staff, and 55 units have a forest inventory). Consequently, it is not feasible to measure the performance and contribution of FMUs at this stage.

Development of FMUs is positioned as a highly important key policy within the forestry sector

[34] JICA (2010). *Climate Change Program Loan (2007-2009: Phase 1) Programme Evaluation Report.*
[35] BAPPENAS (2010). *Indonesia Climate Change Sectoral Roadmap (ICCSR): Forestry sector*.

in Indonesia. The strategic objectives in MOFR's RENSRTA 2010-2014 include "FMU areas legally established in each province and 120 FMUs operationalized." To meet this objective, the GOI has been increasing its budget allocation for FMU development: 12 billion IDR in 2010, 23 billion IDR in 2011 and 103 billion IDR in 2012; 158 billion IDR will be allocated for each of CY 2013 and 2014. In addition, an FMU Secretariat was established in 2012 to support the further establishment and effective operation of FMUs. However, minimal financial support, limited human resources and institutional capacities at the local level, and a lack of stakeholder roles and participation remain as obstacles for FMU development. Also, several issues need to be addressed to assure the sustainability of FMUs, including: (1) streamlining FMU support from the different MOFR directorates, at the central and regional level; (2) cost estimation of FMUs and preparation of a long-term financial plan; (3) a regulatory framework to support the economic activities of FMUs; and (4) a monitoring and reporting system to assess the performance of FMUs and share lessons learned across different regions.

- ***Peatland Conservation***

Appropriate institutional and regulatory frameworks, as well as an accurate peatland map, are crucial for the establishment and implementation of the effective conservation and management of peatland. The policy actions supported by the CCPL are expected to produce positive impacts in this regard. For instance, the Government Regulation on Lowland would redefine the objectives and measures of lowland management toward sustainable use, better control over water resources and mitigation of potential water damage in swamp areas. The Map of Peatland Hydrological Unit would improve GHG inventories and the scientific understanding of peatland, which would further provide the basis for the implementation of regulations concerning peatland management. Although these actions have not been fully achieved, they are expected to be completed in 2013.

In addition to the these actions, the WACLIMAD project, a collaboration between the GOI and the Government of the Netherlands and the World Bank, is assisting with coordination among relevant ministries and regional authorities for better lowland management.

With respect to peat mapping, the moratorium map (PIPIB) has been updated every six months and a Peatland Map revision is in process, being coordinated through the Geospatial Information Agency (*Badan Informasi Geospatial* in Indonesian, or BIG). Also, the definition of "peat" and the mapping methodology would be further shaped/developed by the Indonesia Climate Change Center (ICCC)/DNPI. These initiatives, and particularly PIPIB coordination and its regular updating scheme, have been considered to be a vehicle toward the One Map Initiative.

- ***REDD+***

The National Strategy of REDD+ proposes that full implementation of REDD+ in Indonesia would be in 2014, providing the basis and direction for integrated governance and regulatory systems to ensure the implementation of the REDD+ scheme. Following formulation of the National Strategy, the REDD+ Task Force has begun the process to develop the National Action Plan of REDD+, which would define short-term programs that the GOI could focus on. At the same time, Provincial Strategies and Action Plans of REDD+ (PSAPs) are currently under development in 11 provinces.[36] Such progress with REDD+ at both the national and provincial levels, however, could be considered to be an on-going RAN/RAD-GRK process. This includes several issues such as the allocation of emissions reductions, monitoring and reporting systems and identification of eligible mitigation actions under REDD+ or the RAN/RAD-GRK.

One of key impacts of the National Strategy is the mainstreaming of REDD+ within a wider low carbon development strategy framework. Its formulation process has built a consensus on key issues for national REDD+ policy development and increased coordination, in particular among the REDD+ Task Force, BAPPENAS and MOFR. However, translating the National Strategy of REDD+ into ministers' plans and actions still remain challenges due to rigidity in the GOI planning system.

The two-year moratorium is also an important step towards meeting the GOI's voluntary emissions reduction commitment. Implementation of the moratorium has led to increased coordination between relevant agencies with respect to spatial planning for natural forest and peatland management. Additionally, PIPIB could contribute to the improvement of transparency in forest governance if it becomes publicly accessible.

However, the moratorium has raised a number of contested issues, which include: (1) the definition of forest types used in the moratorium; (2) the additional protected areas under the moratorium; and (3) exceptions for activities related to food and energy security. These issues have remained unsolved, and therefore the amount of carbon stored in the affected forests and peatlands has been subject to debate.

- ***Afforestation and Reforestation***

According to MOFR, reforestation efforts have been successful in reducing the critical land area from 30.1 million ha in 2006 to 27.2 million ha in 2011.[37] However, it is not feasible to estimate the mitigation impact of these activities, as no monitoring of plantation growth has been made

[36] The 11 provinces are: Central Kalimantan; West Kalimantan; East Kalimantan; West Sumatra; South Sumatra; Central Sulawesi; Jambi; Papua; West Papua; Riau; and Ache.
[37] Ministry of Forestry, Indonesia (2012). *Rencana Kerja Kementerian Kehutanan Tahun 2013.*

after three years. In order to secure a real impact on carbon absorption capacity, it is critical to address the issue of monitoring and maintenance of plantations under rehabilitation programs.

As management entities on the ground, establishing FMUs is perceived to be an important means to safeguard the permanence of carbon sequestration in forests.

The GOI would continuously pursue its efforts in rehabilitation and reforestation activities. After the GERHAN program, Indonesia began a program called One Billion Indonesian Trees for the World (OBIT) in 2010, which aims to plant a billion trees each year to help reduce greenhouse gases. Along with this, MOFR has set a target to increase rehabilitation outcomes by 500,000 ha per year in MOFR's Strategic Plan 2010-2014. The rehabilitation would continue to be supported directly or indirectly by the following activities:

- Forest and land rehabilitation, and forest reclamation in priority watersheds; and
- Social forestry promotion, which is exercised through Community Forest (HKm) and Village Forest (HD) establishment.

For CY 2013, the GOI has allocated 43,366 million IDR and 23,545.61 million IDR for the above-mentioned actions, respectively.

In addition to these rehabilitation activities, the forest allocation policy supported by CCPL Phase 2 has led to progress in reducing the pressure on natural forests. MOFR reports progress in IUPHHK-HT (Plantation Forest timber concessions), which have tended to increase more rapidly than IUPHHK-HA (Natural Forest timber concessions).[38] It is MOFR's intention to prioritize the use of timber from plantation forests rather than from natural forests, which in turn contributes to reducing the rates of deforestation and forest degradation in natural forests. This is also supported by a policy set up in MOFR's Strategic Plan in which natural forest concessions and ecosystem restoration are designated at logged-over areas.

3.3.2. Energy

Indonesia's energy consumption has increased significantly, driven by the growing economy, which is projected to grow as rapidly as 6.6% per year during 2010-2014 and 7.2% per year during 2015-2030.[39] Primary energy consumption nearly doubled between 1998 and 2008. In 2011, oil was the major energy source, accounting for 46.77% of total consumption, followed by natural gas at 24.29%, coal at 23.91% and new and renewable energy at 5.03%. Industry was

[38] MOFR (2012). *Rencana Kerja Kementerian Kehutanan Tahun 2013*.

[39] Ministry of Environment, Indonesia. (2010). *Indonesia Second National Communication Under The United Nations Framework Convention on Climate Change (UNFCCC)*. http://unfccc.int/files/national_reports/non-annex_i_natcom/submitted_natcom/application/pdf/indonesia_snc.pdf. (Accessed January 30, 2013.)

the major consumer of energy in 2010, representing 35.5% of total primary energy consumption.[40] The electrification ratio in 2011 was 72.95%, with 27.05% of households still without access to electricity, so the development of infrastructure to provide energy access in rural areas and on small islands remains a priority.

The GOI aims to achieve energy diversification by modifying its conventional fossil fuel based energy mix (mostly petroleum and natural gas), as stipulated by the Presidential Decree on National Energy Policy (No. 5/2006). The GOI aims to enhance the utilization of renewable energy to 17% of the total primary energy mix by 2025; in particular, it aims to fully utilize geothermal power, of which Indonesia has the world's largest domestically-available reserves (more than 27,000 MW). Diversifying the energy mix with emphasis on the use of renewable energy sources also contributes to the reduction of the national dependency on petroleum and to achieving GHG emissions reductions at the national level.

The energy sector is the second-largest contributor to GHG emissions after forestry and LULUCF. In *the SNC*, emissions from the energy sector accounted for 369,800 gigatons of GHGs, which represents 20% of total emissions (55% if LULUCF emissions are excluded). Measures identified to reduce emissions include additional efforts related to energy conservation and new and renewable energy development, namely, enhancing the geothermal program, micro-hydro, biofuel, biomass waste to energy conversion, solar PV, wind energy and coal bed methane. Likewise, emissions reduction would be achieved by increasing efficiency in production processes in energy intensive industries through the introduction of new technologies or by changing raw materials (e.g., using waste as an alternative material in the cement industry).

The CCPL identified key mitigation actions in the energy sector focusing on: (1) power generation; (2) industrial, domestic and commercial components; and (3) other components. Specifically, the CCPL made considerable contributions toward facilitating the GOI's energy diversification, promotion of energy efficiency and reduction of GHG emissions in the energy sector by focusing on the following outcome areas: (1) improving energy security and reducing future GHG emissions from electricity generation through new geothermal projects within an improved policy framework for private sector participation; (2) enhancing promotion of renewable energy by improved monitoring, evaluation and revision of new regulations; (3) enhancing energy efficiency in energy intensive sectors through the use of new technology and

[40] Ministry of Energy and Mineral Resources, Indonesia (2012). *2011 Handbook of Energy & Economic Statistics of Indonesia*. http://prokum.esdm.go.id/Publikasi/Handbook%20of%20Energy%20&%20Economic%20Statistics%20of%20Indonesia%20/Handbook%202011.pdf. (Accessed January 30, 2013.)

the rehabilitation, renovation and replacement of existing facilities; (4) enhancing demand-side management to become a major part of government regulations and to eventually contribute to fiscal budget management; and (5) exploring more cost-oriented pricing mechanisms for reducing both GHG emissions and energy subsidies.

Table 3-7: Summary of major attainments of indicators for Energy sector during CCPL Phase 2

Renewable energy development
Outcome area: Improve energy security and reduce future GHG emissions from electricity generation through new geothermal projects within an improved policy framework for private sector participation
Highlights of Policy Actions: - The Geothermal Fund is now set up. - The feed-in tariff (FIT) for geothermal power was increased from 9.7c/kWh to a range of FIT depending on the type of connection (high or medium voltage) and region. For high voltage the lowest is Sumatera at USD 0.10 and the highest is on Papua at USD 0.17/kWh. - At least six power purchase agreements (PPAs) were signed and more are in the pipeline.
Outcome area: The promotion of renewable energy development is improved by monitoring, evaluating and revising the new regulations.
Highlights of Policy Actions: - FIT for biomass, biogas and MSW was issued. - Presidential decree instructing PLN to conduct acceleration of power plant development using renewable energy, coal, and gas was issued.
Energy efficiency
Outcome area: GHG emissions are reduced (or strategies for reducing GHG emissions are formulated) by enhanced energy efficiency in energy intensive sectors through the use of new technology and the rehabilitation, renovation and replacement of existing facilities.
Highlights of Policy Actions: - The first phase of the Grand Strategy for energy conservation was completed. - EBTKE drafted “REFF-Burn: An Integrated Program for Reducing Emissions from Fossil Fuel Burning ".
Pricing
Outcome Area: Energy consumption is better controlled by a more cost-oriented pricing mechanism, contributing to reducing both GHG emissions and energy subsidies.
Highlights of Policy Actions: - The road map for improving subsidy policy of electricity was finalized. - PLN is focusing on reducing production costs to reduce electricity subsidy.

a) Achievement of the outcome indicators set by BAPPENAS/JICA

JICA and BAPPENAS agreed on the following post-evaluation indicators for the CCPL Phase 2 (CY 2010-2012) energy component: (1) development of geothermal power plants to a cumulative capacity of 1,521 MW in 2012 (from the Electricity Supply Business Plan [RUPTL] 2010-2019); (2) designation of 71 cumulative Geothermal Mining Work Areas in 2014 (from *RAN-GRK*); and (3) application of energy management to 200 companies in 2014 (from *RAN-GRK*). The corresponding achievements are detailed below.

(i) As of November 2012, the existing geothermal power capacity is 1,341 MW from eight geothermal fields. The latest addition, completed in October 2012, ia a 1 × 55 MW geothermal work area (GWA, or WKP [Wilayah Kerja Pertambangan]) at Ulubelu, in Ulubelu district, Tanggamus county, Lampung Province, at the southern tip of Indonesia's Sumatra Island. The geothermal power capacity in 2012 was short of achieving the target.

(ii) Previously, all GWAs were exclusively managed by Pertamina (the National Oil Company). Now, GWAs can be managed by private entities through a tender process. The GOI had issued 55 GWAs as of October 2012, of which six WKPs are operational.

(iii) MEMR is the regulator for implementation of compulsory energy management[41] by large energy users as per Government Regulation No. 70/2009 regarding Energy Conservation. Initial estimates identified 200 companies and commercial buildings that use energy equal to or greater than 6,000 tons of oil equivalent (toe) per year.[42] Three government agencies conduct energy auditing: the MEMR, MOI and the state-owned PT Energy Management.

The GOI established the Government–Private Sector Partnership Program on Energy Conservation under MEMR to encourage industrial and commercial buildings to implement energy efficiency and conservation measures, through participating in a free energy audit program[43] provided by the government. The program provided energy audits to 185 companies and commercial buildings in 2011. The MOI completed the first phase of the Grand Strategy for energy conservation and CO_2 emission reduction in 35 steel companies and 15 pulp and paper companies funded by ICCTF. To date, MOI has: established energy conservation baselines to reduce GHG emissions in 59 companies; established the Emissions and Energy Management Information System (SMIEE); conducted capacity building on energy conservation and emissions reduction benefiting about 500 personnel from industries and local governments; and finalized general guidelines for the implementation of the MOI Preparatory Arrangements for the Indonesia Climate Change Trust Fund (PREP-ICCTF) project, as well as technical guidance for energy conservation and CO_2 emissions reduction.

[41] According to the Law's definition, "Energy management" is: (1) appointing an energy manager; (2) establishing an energy conservation plan; (3) conducting routine energy audits; (4) implementing the steps recommended by the results of an energy audit; and (5) reporting implementation of energy conservation annually to the appropriate authority (the Minister, governor, or regent/mayor).

[42] APEC Energy Working Group (2012). *Peer Review on Energy Efficiency in Indonesia*.

[43] Companies and commercial buildings need to qualify to participate in the program, sign an agreement to execute the energy audit recommendations and make a report within a certain period. Participating companies and commercial buildings in the Partnership Program energy audit program are obliged to report on their energy use every three years as required in the contract for participation.

The combined programs of MEMR and MOI exceeded the achievement target of applying energy management to 200 companies in 2014.

b) Relevance of the outcome areas/targets and policy actions/targets

The target outcome areas and post evaluation indicators – renewable energy development focusing on geothermal energy, energy efficiency and energy pricing – set up to monitor and evaluate the progress of CCPL activities for the energy sector are consistent with and relevant to government priorities. The overarching goals of the current national energy policy until the year 2025 aim to: (1) increase the role of renewable energy; (2) change the national energy mix by reducing dependence on fossil fuels; and (3) reduce energy elasticity below one, including energy infrastructure improvement. Moreover, the GOI's NAMAs are based on seven broad categories including alternative and renewable energy resource development to achieve the 26% emissions reduction target (which could increase to 41% with international support).

- ***Renewable energy development:***

To diversify the fuel mix and mitigate environmental impacts, the GOI launched a program to develop a second phase "crash program" of 10,000 MW of generation capacity by 2014, using predominantly renewable energy sources with a special focus on geothermal. The focus on geothermal development is a strategic response to reduce Indonesia's dependence on fossil fuels, thereby improving energy security, reducing the energy subsidy for fossil fuels and reducing GHG emissions, given that Indonesia hosts 27,000 MW, or about 40%, of the world's total geothermal potential, although only 4% of this potential is currently being utilized to produce electricity. The CCPL has been instrumental in facilitating dialogues and coordination among relevant ministries, donors and other key players, in order to discuss issues that could provide inputs in the drafting and issuance of various policies and incentives including tariff schemes, fiscal incentives and government guarantees to mitigate investment risks, and in setting up the geothermal revolving fund. To some extent, the CCPL Policy Matrix indicators served as guide in charting the necessary steps towards attaining the desired priority agenda.

- ***Energy efficiency***

The GOI's initiatives to promote energy efficiency have been in place for quite some time. For example, the Partnership Program in Energy Audit has had about 500 corporate and commercial building participants since it was initiated in 2003. However, most of the companies participating in the program are reluctant to make medium to high cost energy efficiency investments, citing the unavailability of financial incentives and other special terms for commercial financing as the main barrier. The creation of MOI's Grand Strategy for energy conservation in the industrial sector with financing from the ICCTF addressed this issue. The

CCPL's target to enhance energy efficiency in energy intensive sectors through the use of new technology and the rehabilitation, renovation and replacement of existing facilities by facilitating and monitoring MOI's Grand Strategy for energy conservation complemented the GOI's dual goal of reducing energy use and improving energy infrastructure.

- ***Energy pricing***

Fuel subsidies accounted for 55% of total subsidies in 2011, which was much higher than other non-energy subsidies such as food (6%), fertilizer (8%), plant seeds (0.04%) and small-scale credit assistance (0.8%); 130 trillion IDR went to fuel subsidies while 66 trillion IDR went to electricity subsidies in 2011.[44] Reducing the fossil fuel subsidy is an important goal of the GOI. The finalization of the roadmap for subsidy reduction to address this problem was an important policy action included in the CCPL Policy Matrix.

c) Effectiveness of the policy actions/targets toward attaining outcome targets

The CCPL policy actions and targets presented tiered goals towards the achievement of outcome targets. To illustrate its effectiveness in laying the foundations for harnessing more geothermal power, the table below summarizes the progress in geothermal energy development, demonstrating that the policy actions supported by the CCPL Policy Matrix have done the groundwork for fast-tracking the program.

Table 3-8: Key regulations on geothermal power development

Year	Regulation	Description
2010	Presidential Regulation No. 4/2010	Presidential Regulation No. 4/2010 assigned the state power firm PLN to the task of speeding up the construction of power plants using renewable energy, coal and gas. The regulation also stipulated that the private sector can participate in building the plants, not just PLN. The government provided a guarantee to private companies that build plants and also provided subsidies to PLN.
2011	MEMR Regulation No. 2/2011	MEMR prepared a ministerial regulation that obligates PLN to purchase electricity from geothermal power plants for projects listed in Crash Program II. It obliged PLN to purchase geothermal power at a maximum price of 0.097 USD per kWh.
	MOF Regulation No. 77/PMK.01/2011	The MOF issued a ministerial decree to strengthen policies, which allows the ministry to issue a "feasibility letter" when PLN signs PPAs with IPPs. It stipulated a mechanism for a Guarantee Letter for PLN when implementing the Presidential Regulation No. 4/2010.
	MOF Regulation No. 139/PMK.011/2011	Updated MOF Regulation No. 77/PMK.01/2011, signed on August 22, 2011.
2012	MEMR Regulation No. 22/2012	This regulation replaced MEMR Regulation No. 2/2011, increasing the FIT from 0.097 USD per kWh to a range of FITs depending on the type of connection (high or medium voltage) and region. For high voltage the lowest is Sumatera at 0.10 USD per kWh and the highest is on Papua at 0.17 USD per kWh.

[44] Pradiptyo, R. and Sahadewo, A. (2012). "On The Complexity of Eliminating Fuel Subsidy in Indonesia; A Behavioral Approach." *MPRA Paper 40045*. Munich, Germany: University Library of Munich.

Year	Regulation	Description
	MOF Regulation No. 3/PMK.011/2012	This covers the procedures for the management and accountability of Geothermal Fund facilities. In Chapter III Article 6, it also designated PIP (Centre for Government Investment) as the Geothermal Fund Manager as stipulated in the Finance Minister's Decree No. 286/KMK/011/2011. PIP is conducting a detailed feasibility study to disburse funding for two geothermal exploration projects worth 60 million USD and one exploitation project worth 132 million USD.

d) Impacts and sustainability of outcome targets

- ***Renewable energy development***

The geothermal power capacity achieved in 2012 was 1,341 MW, which was a bit short of the target 1,521 MW. As the rate of progress currently stands, it requires a herculean effort if Indonesia is to realistically achieve 3,967 MW of geothermal capacity by 2014.

While considerable progress has been made through the CCPL to improve the policy framework design to promote geothermal development and operate the exploration fund, there are fundamental issues that remain to be settled, such as the categorization of geothermal extraction as a mining activity and provision of access to protected forest areas. There is already an MOU between MEMR and MOFR to coordinate with each other on the issuance of licenses for geothermal development projects in Indonesia's production, protected and conservation forest areas. The GOI is also in the process of revising the Geothermal Law 27/2003.

Currently, there is low activity in terms of operationalizing the WKPs. Least cost tender, which was the basis of the 55 WKPs that have been awarded, only six of which are operational, is not sufficient to ensure that the financial resources of companies are adequate to embark on geothermal exploration. There are plans to auction six geothermal working areas with a total capacity of 400 MW in 2013 once the revision of Government Regulation No. 59/2007 on Geothermal Business Activities is completed. One of the key points up for revision is the selection of WKP winners based on the lowest offered price. The aim is that the decision in the selection of WKPs are based on a company's program and commitment instead of the lowest price bid to ensure the success of project implementation. A favorable result of the revision could ensure meeting the target of a cumulative total of 71 WKPs by 2014.

In terms of financial support, the geothermal revolving fund is now in place, but current operations only utilize national government funds, and additional funding from external sources has yet to be tapped.

- ***Energy efficiency***

The first phase of the Grand Strategy targeting energy conservation and emissions reduction in 35 steel companies and 15 pulp and paper companies was completed successfully. The outputs

achieved are commendable: (1) established energy conservation baselines and reduction of CO_2 emissions in these 50 companies plus 9 cement companies (59 companies in total); (2) established the SMIEE; (3) provided human resources capacity building for around 500 personnel in industry and local and central government on energy conservation and CO_2 emissions reduction; (4) finalized the General Guidelines for the implementation of the MOI PREP-ICCTF project and the Technical Guidelines for energy conservation and CO_2 emissions reduction (11 documents); (5) completed the Pre-Feasibility Study (Pre-FS) for Energy Conservation and CO_2 Emission Control in the aforementioned 50 companies; (6) formulated an Investment Grade Audit (IGA) for 38 companies (the remaining 12 companies have low Energy Efficiency Certificate [EEC] percentages for IGA formulation); and (7) increased the awareness of the Central and Provincial governments towards the climate change issue through training, workshops, discussions, coordination meetings, various forms of cooperation and programs proposed related to climate change.

Replication of the same approach in other industrial sectors is crucial. Other energy intensive industries (ceramics, textiles, fertilizer, food and beverage, electronics and petrochemical) may need funding for diagnosing their energy usage, expecting assistance similar to the ICCTF funding provided to the 35 steel companies and 15 pulp and paper companies noted above. To sustain the program and transcend the financial barriers, the lessons learned and best practices from the first phase of the Grand Strategy as supported by the CCPL could be translated into a mechanism utilizing the State Budget of Revenues and Expenditures (APBN).

3.3.3. Transportation

Although Indonesia is an archipelago, much of the activity within the transport sector is associated with the road transport system. Road transport services in Indonesia include public and private mass transport options, as well as services for individuals including motorbike and car taxis and non-motorized transport (bicycles and pedicabs). Public and private mass transport options are available in most growth centers like Jakarta. The situation in many small and medium sized cities as well as in rural areas is different: public transport services are irregular and often need to be negotiated with private transport providers.

In 2010 there were approximately 76.9 million motor vehicles on the roads, including 8.8 million private cars, 61 million motorcycles and only 2.25 million public buses.[45] A study by

[45] Statistics Indonesia (2011).

the ADB/DFID[46] in 2006 predicted that the quantity of vehicles in Indonesia would more than double between 2010 and 2035, with the growth expected to be largest in two-wheeled and light duty vehicles (cars). Low fossil fuel prices (held down by subsidies from the GOI) and limited public transport alternatives have caused rapid growth in the use of motor vehicles, and thus many people travel in private vehicles. Public transportation services are inadequate, falling short of meeting demand in terms of quality and quantity. Jakarta alone loses about 5 billion USD per year[47] on delays and wasted fuel.

The transport sector is one of the major sources of GHG emissions. It is also the most rapidly growing source: in 2005 it contributed about 23% of the total CO_2 emissions from the energy sector, or 20.7% of the country's overall CO_2 emissions. Road transport dominates the overall emissions from transport, at around 90.7%, while other transport sub-sectors have significantly smaller contributions. A 2010 report by the GOI's Ministry of Transportation (KEMENHUB) predicts that emissions from land transport would nearly triple between 2008 and 2030.

To help alleviate the problems in the road transport sector, the CCPL identified key mitigation actions focusing on: (1) measures on overall transport policy; (2) modal shifting; and (3) traffic management. Major attainments of indicators in CCPL Phase 2 can be summarized as follows.

Table 3-9: Summary of major attainments of indicators for Transportation sector during CCPL Phase 2

Overall Transportation Policy
Outcome area: Transportation policy is enhanced enough to avoid deteriorating traffic congestion.
Highlights of Policy Actions: - *The Jabodetabek Transportation Master Plan* was revised in 2011. - *The Presidential Regulation for the Jabodetabek Transportation Authority (JTA)* was drafted by 2011.
Modal Shifting
Outcome area: The increase rate of car users remains at a low level, and is less than that of users of public transportation.
Highlights of Policy Actions: - Development of Bus Rapid Transit (BRT) in two cities (2010-2011). - Improvement of pedestrian facilities and bicycle lanes (2010-2011).

[46] ADB/DFID (Asian Development Bank/Department for International Development) (2006). *Energy Efficiency and Climate Change Considerations for On-road Transport in Asia*. http://www.adb.org/Documents/Reports/Energy-Efficiency-Transport/energy-efficiency.pdf. (Accessed February 5, 2013.)

[47] The Jakarta Post, March 16, 2011, referring to a study by the Jakarta Transportation agency.

Traffic Management
Outcome Area: Traffic management is enhanced enough to avoid deteriorating traffic congestion.
Highlights of Policy Actions: - The Area Traffic Control Systems (ATCS) were introduced in Bogor and Surakarta in 2010. - The arrangement for Electronic Road Pricing (ERP) was specified in the Government Regulation 32/2011 on Traffic Management in 2011.

a) Achievement of the outcome indicators set by BAPPENAS/JICA

No outcome indicators were set for the transportation sector.

b) Relevance of the outcome areas/targets and policy actions/targets

The GOI has three major strategies to reduce GHG emissions from the transportation sector: to reduce the volume of transportation; to shift the means of mobility from private cars to public transport and non-motorized transport modes; and to improve energy and carbon efficiency. Of these three strategies, “to shift,” or, in other words, “modal shifting,” has the largest reduction potential, while “to avoid/reduce” would be the most cost-effective strategy.

In the 2010 Policy Matrix, Modal Shifting (for shifting the means of mobility) and Traffic Management (for avoiding/reducing the volume of transportation) were selected as the two outcome areas to be specified. The policy targets/actions for the former area were: development of BRT; and improvement of pedestrian facilities and bicycle lanes. The actions for the improvement of traffic management were: area traffic controlling systems (ATCSs); and the issuance of a government regulation on traffic management and engineering.

In addition, the Ministry of Transportation (MOT), BAPPENAS and the development partners were aware of the importance of covering fundamental strategies of transportation development in the CCPL. Thus, it was agreed to include the Overall Transportation Policy as a new outcome area in the 2011 CCPL Policy Matrix. The 2011 Policy Matrix further focuses on the institutional development of transportation policies particularly in the growing urban areas, through developing a master plan and authority to manage transportation in the metropolitan area, and by regulating traffic management and engineering systems. Consequently, the outcome areas and policy actions became more relevant in 2011.

c) Effectiveness of the policy actions/targets toward attaining outcome targets

As was mentioned above, the policy targets/actions for modal shifting, namely, development of BRT and improvement of pedestrian facilities and bicycle lanes, were not “attained” by the end of 2010 as originally targeted. The construction of BRT lanes and bus stops by the local government could be completed by the time the buses are provided by MOT. In developing a

BRT system, the coordination between MOT and the local government is quite important. Corridor III (Kalideres, Poris Plawad) was connected with TransJakarta-Tangerang in June 2012, although ticketing is not yet integrated, while Bali Trans Sarbagita developed two corridors. Corridor II was implemented while work on Corridor I is in progress. MOT and local transportation authorities could learn from such experiences for smoother introduction of BRT in the future.

The actions to improve traffic management, namely the establishment of ATCSs in Bogor and Surakarta, and the issuance of Government Regulation No. 32/2011 were attained. Government Regulation No. 32/2011 has regulated the steps to be taken by a regional administration to implement ERP, which includes planning, managing traffic, procurement and preparing road facilities. However, a road-pricing levy was not included as a tax or retribution in the 2009 Regional Tax and Retribution Law, so another government regulation from MOF is needed to categorize ERP fees as tax or retribution.

d) Impacts and sustainability of outcome targets

The Jabodetabek Transportation Masterplan, once adopted, would be Greater Jakarta's transportation master plan until 2030. It calls for the establishment of the JTA to coordinate regulations, policies, various institutions and regional administrations. There is no decision yet on the creation of the JTA as discussions are still ongoing.

BRT systems, using specially designed infrastructure such as bus lanes, stations and coupled buses, have been introduced in many cities around the world to reduce traffic jams. Since 2004 Indonesia has continuously enhanced BRT systems in Jakarta and other large cities including Bogor, Surabaya and Yogyakarta. The BRT systems developed in two cities in 2010 and 2011 are also expected to contribute to mitigating the increase in private vehicle use and reducing CO_2 emissions. However, the BRT system in Indonesia is not optimized as most lines do not have dedicated lanes which also cause unnecessary accidents. Traffic congestion remains a huge problem in Jakarta in spite of the extensive BRT lines. Other mass transport modes are being explored such as the much awaited Jakarta Metropolitan Rapid Transit (MRT) expected to be operational by 2016.

While an ATCS minimizes intersection delays and creates continuous traffic flow, ERP optimizes traffic assignments by reducing less-necessary or less-urgent drives on heavily trafficked highways and streets. The introduction of ERP systems is expected to be promoted by the regulations developed for peak periods, and would contribute to optimizing the usage of road networks and traffic movement, and to ensuring safer, better-ordered and smoother traffic.

However, the actual impacts to mitigate private vehicle use and better management of urban traffic, as well as further impacts of GHG emissions reduction, require further monitoring and analysis.

3.4. Adaptation

As Indonesia is an archipelago with a large proportion of its population pursuing livelihoods in fisheries and agriculture, it is vulnerable to the impacts of climate change. Since the late 20th century, increasing numbers of floods, landslides, forest fires, droughts, high tides and diseases have been observed in Indonesia. These incidents may cause large-scale loss of human life and production losses in agriculture, fisheries, livestock and other industries. It is understood that "the increasingly high temperatures are exacerbating the extreme regional weather and climate anomalies associated with El Nino."[48]

To minimize the impacts of these incidents on the society and economy of Indonesia, steady implementation of measures based on a precise understanding and anticipation of potential impacts is inevitable.

The GOI places a high priority on climate adaptation measures in four sectors and related issues, as follows: (1) water scarcity, flood and drought in the water resources management sector; (2) coastal inundation, rising sea surface temperatures and extreme events in the marine and fisheries sector; (3) food production and plantation production in the agriculture sector; and (4) vector-borne diseases and diarrheal diseases in the health sector.

Of these sectors and issues, the CCPL Phase 1 Policy Matrix selected the following sectors: Water Resources; Water Supply and Sanitation; Agriculture; Disaster Management; and Marine, Coral and Fisheries. The CCPL Phase 2 (2010, 2011 and Future Policy Directions) Policy Matrix placed more emphasis on vulnerability and impact assessment, while two sectors were deleted, namely, Water Supply and Sanitation, and Disaster Management.

[48]MOE (2010). *Second National Communication: Executive Summary*, p. xvi. http://unfccc.int/files/national_reports/non-annex_i_natcom/submitted_natcom/application/pdf/indonesia_snc.pdf. (Accessed January 10, 2013.)

Table 3-10: Summary of major attainments of indicators for adaptation policies during CCPL Phase 2

Climate Forecasting and Impact and Vulnerability Assessment
Outcome area: Strengthening of institutional and regulating framework and capacity for scientific research on adaptation
Highlights of Policy Actions - Development of the Climate Modeling Scenarios (2011). - Development of Climate Database (2011). - Vulnerability assessment studies (2010- continued). - Indonesian Voluntary Mitigation Action was sent by GOI to UNFCCC in 2010. - Establishment of the Indonesian Global Ocean Observation System (INAGOOS) (2010).
Water Resource Management
Outcome area: Improving water resource management including climate change adaptation measures specifically in nationally strategic river basins.
Highlights of Policy Actions - Strategic assessment of the future of water resources in Java island. (2010) - Establishment of the Provincial Water Resource Councils (2010- continued). - Preparation of integrated water resource management plans (POLA) with climate change assessment in national strategic river basins in Java island. (2008- continued) - Preparation of the River Basin Master Plans. (2010- continued)
Agriculture
Outcome Area: Strengthening of institutional and regulating framework to improve resilience of farm production and reduce drought risk.
Highlights of Policy Actions - Carrying out of SRI (2007- continued). - Carrying out of CFS (2007- continued). - Carrying out of land management without burning (2010). - Issuance of *the Presidential Instruction on the security measures for rice production in facing extreme climate* (2011). - Issuance of technical guideline on CFS/SRI (annual).
Marine, Coral and Fisheries
Outcome Area: Strengthening of institutional and regulating framework to manage coastal zones and small island.
Highlights of Policy Actions - Development of *the Climate Resilient Village Plan for Coastal Areas* (2010). - Completion of t*he Coastal Vulnerability Index* (2010). - Research on the variability of CO_2 flux, and updating of the Strategic Plan for Blue Carbon Research (2010/2011)

a) Achievement of the outcome indicators set by BAPPENAS/JICA

In order to measure the outcomes of the policy actions for the climate forecasting and vulnerability assessment sector during CCPL Phase 2, JICA, in consultation with BAPPENAS, set as an indicator that two or more INAGOOS pilot activities were to be completed by 2014 (referring to the fact that no activities had been completed as of 2010). The GOI has already launched the projects, which are expected to be completed by 2014.

Another indicator, set for the water resources management sector, was that POLA were to be completed and approved at 12 or more river basins by 2012 (noting that they had been completed at three river basins as of 2010). The GOI had already approved POLA for 12 basins by July 2012, and therefore this target has already been achieved.

b) Relevance of the outcome areas/targets and policy actions/targets

The outcome areas of adaptation policies were selected from the sectors and issues prioritized in the GOI's key documents including *the Yellow Book*, *ICCSR* and *SNC*, with minor exceptions regarding issues related to health and coastal inundation

It is worth mentioning that the CCPL Phase 2 Policy Matrix placed emphasis on the issues of understanding and forecasting the impacts of climate change, and assessing vulnerabilities. Since precise data form the basis of appropriate planning and steady implementation of adaptation measures, for the first several years of the ICCSR period (2010-2030), the GOI is placing the highest priority on the development of data and information, and on knowledge management. In this context, with its emphasis on climate forecasting and vulnerability assessment, the CCPL Phase 2 Policy Matrix became even more relevant to the priorities of the GOI's adaptation policies.

Furthermore, each outcome area included yearly targets, which were selected out of the annual or medium-term action plans prepared by the GOI's line ministries, and finalized in consultation with BAPPENAS. Therefore the policy actions/targets were also relevant since they were decided by the GOI's initiatives as milestones toward the aforementioned outcome targets.

c) Effectiveness of the policy actions/targets toward attaining outcome targets

The progress and attainments of the yearly policy targets/actions set in each outcome area indicate the effectiveness of the program with respect to the outcome targets.

Generally speaking, good attainments were observed for the actions under the climate forecasting and vulnerability assessment sectors, as well as the marine, coral and fisheries sector. Most of the yearly targets were attained, and the attainments were further evolved into actions in the succeeding years. On the other hand, attainments of the actions in the water resources and agriculture sectors have varied widely through the years. While some of the actions went beyond attaining the targets, others fell short.

Of course, it is not appropriate to judge that the programs/projects under the latter two sectors were not effective just because some of the numerical targets were not attained. For instance, the viability of water resource management policies depends more on careful studies and

communication with stakeholders including communities and residents rather than the mere quantity of plans issued. Therefore, follow-up monitoring of the products and byproducts is necessary to evaluate whether water resource management policies were effectively developed.

In the agriculture sector, mainly three kinds of projects have been introduced to improve the resilience of farm production. Although the projects were important, their coverage both in terms of area and population were quite limited compared to the vast scale of the agriculture sector in Indonesia. Moreover, the yearly targets rose and fell according to the amount of the budget secured for each year during the CCPL period. Taking these facts into account, one could argue that the adaptation measures for the agriculture sector could have become more productive if their effectiveness had been reviewed during the period, with remedial or improvement measures being introduced as necessary.

d) Impacts generated through the attainment of outcome targets and their sustainability beyond 2013

The policy actions carried out during the 2007 to 2009 period in the aforementioned outcome areas have further impacts on the resilience of Indonesia's society and economy in the face of climate change.

The outcome target for the climate forecasting and vulnerability assessment was to strengthen the institutional and regulatory framework and the capacity for scientific research on adaptation. Since precise data and information are inevitably required for all adaptation measures, the attainment of this target, realized in part through the progress/attainment of the policy actions stated in the CCPL Policy Matrix, is a significant contribution to the preparedness of Indonesian society with respect to climate change. For the period beyond 2013, two major directions are specified, namely, continuous assessment of vulnerability and preparation of vulnerability maps in other areas, and putting INAGOOS into operation in the field of oceanography. For the latter target, the Ministry of Marine Affairs and Fisheries (MMAF) has already prepared a strategic plan until 2014, and secured support from AFD.

An outcome target of improving water resource management including climate change adaptation measures was set for the water resource management sector. In concrete terms, water resource management in anticipation of climate change aims to alleviate the risks of floods and drought, and to appropriately distribute water to the agriculture, manufacturing, electricity and household sectors. In pursuit of these objectives, MOPW would continue to support the development of river basin master plans, particularly by preparing development guidelines. However, such policies may sometimes produce byproducts or negative impacts, such as the forcible relocation of local people. MOPW conducts feasibility studies and communication

meetings prior to implementing the master plans. Ex-post monitoring and evaluation focusing on both positive and negative impacts is also desirable. Further actions are advised as follows: (a) further strengthening of water resources management policies; (b) improvement of POLA and RENCANA taking into considerations the quantitative impacts of climate change and the adaptation measures; and (c) capacity development of river basin organizations to implement POLA/RENCANA.

The outcome target of strengthening the institutional and regulatory framework to improve the resilience of farm production and reduce drought risk was set for the agriculture sector. Likewise, the marine and fisheries sector established an outcome target of strengthening the institutional and regulatory framework to improve the resilience of farm production and reduce drought risk. Both targets imply the objectives of ensuring food security through supporting farmers and farming communities as well as fishers and coastal communities, with the goal of increasing production while minimizing climate change impacts. In fact, the GOI has raised an ambitious target of increasing rice production to 10 million tons and tripling fisheries and aquaculture sales by 2014. While pursuing such an ambitious goal, the GOI would continue its efforts toward strengthening the resilience of farm and fisheries production through CFS, SRI and various measures for improving coastal communities' resilience in the face of climate change. It could be pointed out that the target numbers of SRI projects beyond 2012 are expected to decrease due to budget constraints. In order to enhance the impacts of these on-the-ground projects with limited financial resources, the GOI is encouraged to adopt measures to replicate CFS and SRI, as well as land use without burning. Furthermore, projects for building coastal communities' resilience would be enhanced in the years beyond 2012. MMAF launched a new program, Disaster and Climate Change Resilient Coastal Village for 2012-2014, in 48 villages.

Such directions on the part of the GOI for increasing farm and fisheries production while building the resilience of farm and coastal communities are to be evaluated highly. The attainments of adaptation measures during the CCPL period could be expected to be sustained, and to generate further impacts toward improving the resilience of Indonesia's society and economy in the face of climate change.

However, further efforts could be put into the replication or dissemination of advanced projects over wider areas of the country. To name only two examples: in addition to issuing guidelines, MOPW could convene workshops inviting local organizations to accelerate master plan development; and MOF and BAPPENAS could explore fund allocation schemes to facilitate SRI, CFS and land management without burning on the initiative of local governments. International organizations could also seek further collaboration with the GOI and/or local

governments toward the flexible and smooth replication and dissemination of adaptation measures. For instance, MOA anticipates receiving technical assistance to develop and disseminate adaptation measures, particularly in the 12 major rice-producing areas.

Moreover, food security is not ensured by increasing food production alone. Food (in)security is determined by various factors such as volatility in production and prices, distribution systems, demographic composition, and other socio-economic conditions. It is desirable to assess such various factors in order to properly understand the impacts of the policies attained in the two sectors.

4. Conclusions, lessons learned and recommendations

4.1. Conclusions

The CCPL made direct and indirect contributions to progress in the mainstreaming of climate change issues in the GOI's development policies. Most of the policy actions/targets set in the Policy Matrix were attained as scheduled. Some of the actions/targets including legal development requiring agreement among multiple stakeholders were not attained; however relevant organizations have been continuing the efforts of coordination and have made substantial progress (table 4-1).

Table 4-1: Highlights of major attainments/progress of climate policies in Indonesia during CCPL period

Key Policy Issues	
Phase 1 (2007-2009)	- *The National Action Plan addressing Climate Change (RAN-PI)* was issued. (2007) - *The Presidential Regulation No.46/2008 on National Council on Climate Change* was issued. (2008) - Climate actions were incorporated into Medium Term Development Plan - Indonesia Climate Change Trust Fund (ICCTF) was launched. (2009) - Second National Communication to UNFCCC was finalized.
Phase 2 (2010, 2011 and beyond)	- *Indonesia Climate Change Sectoral Roadmap (ICCSR)* was finalized. (2010) - *Indonesian Voluntary Mitigation Action* was sent by GOI to UNFCCC in 2010. - *Presidential Regulation no 61/2011 on RAN-GRK* was issued. (2011) - The Strategy for Mainstreaming Adaptation into National Development Planning was finalized. (2012) - PBB was introduced in 2011. - *Presidential Regulation no 71/2011 on National GHG inventory* was issued. - RAD-GRK was prepared in 29 provinces. (as of January, 2013)
Mitigation	
Forestry	
Phase 1 (2007-2009)	- Government Regulation on Forest Planning Management and Forest Utilization was issued. - Ministerial Regulation was issued for Timber Legality Verification System. - A Readiness Program Proposal was submitted to the Forest Carbon Partnership Facility, and a REDD program was initiated with UN-REDD. - Impacts and mechanism of GERHAN program were reviewed.
Phase 2 (2010, 2011 and beyond)	- 59 model FMUs have been established at site, along with the development of regulatory framework for FMU. - Technical Guidance of Forestry DAK was issued. - Government Regulation on Lowland and Government Regulation on Protection and Management of Peat Ecosystem were drafted. - *Presidential Instruction No. 10/2011 on the moratorium* was issued. (2011) - MOFR has produced a series of the moratorium indicative map. - National Strategy of REDD+ was finalized by REDD+ Task Force. (2012)

Energy	
Phase 1 (2007-2009)	- *The Law No. 30/2007 on energy* (promote renewable energy development) was enacted. - National Energy Council (DEN) was established. - Ministerial Regulation on the purchasing price of electricity from renewable energy was issued. (2009) - *Ministerial Regulation No.70 year 2009 on Energy Conservation* was issued. (2009) - National system of energy audits for major firms was developed.
Phase 2 (2010, 2011 and beyond)	- The Geothermal Fund was set up. - FIT for biomass, biogas and MSW was issued. - Presidential decree instructing PLN to conduct acceleration of power plant development using renewable energy, coal, and gas was issued. - The first phase of the Grand Strategy for energy conservation was completed. - The road map for improving subsidy policy of electricity was finalized.
Transportation	
Phase 1 (2007-2009)	No action was set under CCPL scheme.
Phase 2 (2010, 2011 and beyond)	- *The Jabodetabek Transportation Master Plan* was revised. (2011) - *Presidential Regulation for the Jabodetabek Transportation Authority (JTA)* was drafted. (2011) - Bus Rapid Transit (BRT) was developed in two cities - The Area Traffic Control Systems (ATCS) were introduced in Bogor and Surakarta. (2010) - The arrangement for Electronic Road Pricing (ERP) was specified in the *Government Regulation 32/2011* on Traffic Management. (2011)
Adaptation	
Phase 1 (2007-2009)	**Climate Forecasting and Impact and Vulnerability Assessment;** - Automatic Weather Stations were installed. - National Disaster Management Agency (BNPB) was established. - National Action Plan for Disaster Risk Reduction was finalized. **Water Resource Management;** - National Water Resource Council (NWRC) was established. - Integrated Water Resources Management Patterns and Plans (POLA) were finalized in 3 river basin areas. **Agriculture;** - Ministerial decree on irrigation management was issued. - An irrigation asset management system was developed. **Marine, Coral and Fisheries;** - The Indonesian National Plan of Actions (NPOA) of Coral Triangle Initiatives on coral reef, fisheries and food security was launched.
Phase 2 (2010, 2011 and beyond)	**Climate Forecasting and Impact and Vulnerability Assessment;** - The Climate Modeling Scenarios was developed. (2011) - Climate Database was developed. (2011) - Vulnerability assessment studies have initiated. (2010- continued) - The Indonesian Global Ocean Observation System (INAGOOS) was established. (2010) **Water Resource Management;** - Establishment of the Provincial Water Resource Councils has been advanced. (2010- continued) - Preparation of integrated water resource management plans (POLA) in national strategic river basin has advanced. - *The River Basin Master Plans* have been prepared. (2010- continued)

	Agriculture; - *The Presidential Instruction on the security measures for rice production in facing extreme climate* was issued. (2011) - Technical guideline on CFS/SRI was issued (annual). **Marine, Coral and Fisheries;** - *The Climate Resilient Village Plan for Coastal Areas* was developed. (2010) - *The Coastal Vulnerability Index* was completed. (2010)

Although CCPL funding has ceased, the CCPL framework, comprising the Policy Matrix, Joint Monitoring Activities and Policy Dialogues, has been effectively utilized toward generating several influences, as follows:

- Improvement of coordination and information sharing among the stakeholders within the GOI as well as with development partners;
- Identification of progress/attainments and obstacles/challenges of climate change policies in the relevant sectors of forestry, energy, transportation and adaptation; and
- Introduction of remedial actions for the challenges identified as well as formulation of further project assistance on the basis of the monitoring results and policy dialogues.

High level political commitment and support for climate change issues, namely GOI's target of 26 % GHG emissions reduction from BAU by 2020 declared by the President, facilitated the stakeholders in moving forward climate change policy measures including the formulation of *RAN-GRK* and RAD-GRKs and development of necessary mechanisms of GHG inventory, financing and budgetary allocation. In particular, the clear target of emissions reduction prompted relevant ministries to conduct specific cost estimation and cost-benefit analysis for achieving the commitment, which in turn accelerated financial policy reforms with an active involvement of MOF.

Such favorable achievements of the program provided a platform for the GOI toward further progress of its climate change policies toward medium- to long- term goals specified in *ICCSR*, *RAN-GRK* and *RAN-API*. Furthermore, the experiences could also be applied to the international cooperation programs addressing climate change issues in other countries.

4.2. Lessons learned

The GOI, development partners and the monitoring team faced some challenges during the CCPL period. The following issues in particular could have been addressed with possible countermeasures at an early stage in order for the CCPL to generate more favorable impacts:

- The ministries/agencies in charge of program coordination within the recipient government (BAPPENAS in the case of Indonesia) might face difficulty in gaining active participation of the line ministries. Capacity building including provision of permanent professional staff to support the coordinating ministry/agency in charge of program management could

contribute to the efficient operation of the program;

- BAPPENAS was an appropriate coordinating entity for CCPL monitoring, considering their mandate related to the national development planning, such as planning, budget allocation (together with the MOF) to the priority sectors as well as monitoring of the implementation of *RPJMN* and RKPs in cooperation with relevant ministries and agencies. In addition, BAPPENAS has a role in coordinating *RAN-GRK*;
- The ownership among the line ministries was weak, at least in the beginning of CCPL due to lack of incentives for them to participate in the program. High-level dialogues between the executive policy advisor delegated by JICA and relevant GOI ministers enhanced such ownership. Incentive mechanisms, however, to the line ministries could be explored when a cooperation program/project addressing climate change issues including CCPL is prepared. For instance, introduction of an additional budgetary allocation mechanism connected to the program. Some ministries effectively negotiated for securing budget for CCPL related actions in GOI budgetary allocation process. Joint studies among donor agencies and relevant ministries on specific indicators in CCPL policy matrix such as GERHAN review provided an additional incentive to the relevant line ministries and an opportunity to enhance cooperation among them;
- Strengthening the network of relevant officials in charge of climate change program, by providing an appropriate forum for consulting and information sharing on climate change policies (including the CCPL policy actions), in either donor and/or recipient country involving line ministries and program coordination ministries/agencies, will enhance the ownership of relevant ministries and help setting appropriate objectives/targets/action plans by the relevant ministries. As one of the measures for providing such forum, a support mechanism related to CCPL implementation, e.g. funding meetings and travel cost for coordination and information sharing could be incorporated within the framework of CCPL. Within the CCPL framework, supports were provided for holding policy dialogues and facilitate discussion for: a) RAD-GRK preparation, b) Incentive policies for geothermal and other renewable energy development, c) Consultation among stakeholders to the integration of rehabilitation activities under FMUs and, and d) Coordination between the MOFR and the MOPW on watershed development. These policy dialogues contributed to form the network and to promote the coordination among the relevant stakeholders. Outside the CCPL, the Climate Change Policy Development Forum organized by BAPPENAS, involving development partners also, has been introduced. But such coordination mechanism with the development partners needs further enhancement in terms of efficiency and effectiveness.
- The relevance of the Policy Matrix could be periodically and flexibly reviewed among the stakeholders throughout the program period to reflect the national priorities of the recipient

government. In the case of Indonesia actions/targets to be set in the Policy Matrix were carefully selected to be consistent with the GOI's action plans and strategies. Series of sectoral-based policy dialogues among donor agencies and relevant ministries/agencies were conducted for finalizing targets/actions in policy matrix as well. However some of the sectors prioritized by the GOI, namely health for adaptation and agriculture for mitigation, were not included;

- The monitoring activities might not be effectively operated if the targets/actions lacked clearly defined monitoring methods of their achievements, including evaluation criteria and verification measures (such as evidence required). Furthermore, some of actions/targets had already been attained and/or relinquished when policy matrix was formulated. In such cases it was also difficult to obtain productive results from policy dialogues;
- Measures need to be taken to minimize the burden of the line ministries to participate in the monitoring activities and policy dialogues. As for monitoring activities, joint monitoring by donor agencies would be a favorable measure to avoid duplication of monitoring activities, e.g. interviews by each donor agency. It is also desirable, at the stage of formulating policy matrix, to clearly indicate criterion and required information for monitoring and evaluation activities. In addition, involvement of local consultants who have experiences and strong relationship with government officials is particularly significant for smoothly implementing both monitoring and policy dialogues with stakeholders. Further utilization of current monitoring mechanism of governmental programs and actions toward CCPL monitoring would be worth being considered; and
- A flexible and speedy provision of technical assistance and/or grant assistance scheme could be incorporated within or in parallel to the CCPL process in order to support any additional needs related to climate change programs of line ministries to gain their more active involvement.

Such experiences could be utilized toward future climate policies in Indonesia, as well as in international cooperation programs addressing climate change issues in other countries.

4.3. Recommendations

a) Toward effective cooperation programs addressing climate change issues

The operation of the policy dialogues and monitoring activities are the keys to effectively promoting the mainstreaming of climate change issues. Therefore, the evaluation team sincerely hopes that the governments of developing countries and international development partners will consider the following points while preparing cooperation programs.

Policy dialogues could be fully utilized to improve coordination. To this end:

- Policy dialogues need careful design to enable discussions on relevant agenda items among relevant participants;
- Coordination among the development partners needs to be dealt with in the preliminary stage of the program;
- Measures to further encourage line ministries' commitment to monitoring and dialogues could be consistently introduced; and
- Information exchange, role sharing and synergy between the program and other development partners and other initiatives addressing climate change issues could always be addressed.

Monitoring activities could serve as a process for understanding the progress of policy actions, identifying challenges and exploring potential cooperation schemes, with a positive commitment by the responsible organizations. To this end:

- Too much strain on the responsible organizations is to be avoided when the mitigation/adaptation action plans are implemented and the results are monitored. Burdens of line ministries could be mitigated when monitoring activities are conducted in close cooperation with resident experts dispatched by the development partners to the line ministries as well as local experts with abundant experience of working with government organizations;
- It is also desirable that tangible benefits for the responsible organizations are explored, including the provision of additional technical assistance;
- The targets/indicators require to be set with clearly defined monitoring methods, including evaluation criteria and verification measures (such as evidence required); and
- The timing of policy matrix development could be carefully determined. Policy matrix formulated at the end of the year could include actions/targets having been already attained and/or relinquished: in such cases monitoring and policy dialogues would become less productive.

b) Toward further development of climate change policies in Indonesia

The GOI is expected to continue its commitment to climate change issues in its medium- to long-term goals, including GHG emissions reduction as well as building the resilience of its economy and society. To ensure further progress, the GOI and the development partners would consider several key points on climate change policies in Indonesia, as follows.

Upstream strategies including *RAN-GRK/RAN-API* and RAD-GRKs could be further improved with:

- More detailed action plans based on the refined scenarios of mitigation/adaptation; and

- Enhancement of the GHG inventory systems.

Mitigation and adaptation actions could be further mainstreamed sectorally and at the local level. To this end:

- Further support could be introduced, including the capacity development of relevant ministries/agencies;
- Systems for information sharing and capacity development need to be designed in parallel to the program.;
- A mechanism for rectifying regional imbalances in the supply and demand of financial, technical and human resources as well as coordination with international support programs/projects could be established, and effectively linked with the MRV systems;
- A mechanism for the optimal allocation of international funds with the aim of obtaining credits could be developed through clarifying the treatment of REDD+ in *RAN-GRK* and RAD-GRKs to reflect international discussions and agreements on climate finance and credits;
- International cooperation programs/projects could be further enhanced in addition to existing or currently planned REDD+ programs/projects; and
- Development partners need to be identified at an early stage to cooperate in programs/projects to be counted in the “additional 15%” toward reduction of GHG by 41% with international support.

A P P E N D I X

Appendix 1	CCPL Phase I Policy Matrix (Agreed in July of 2009)
Appendix 2	CCPL Phase II Policy Matrix (Agreed in April of 2010)
Appendix 3	National Action Plan on Green House Gas Emissions Reduction (RAN-GRK)
Appendix 4	National Action Plan of Climate Change Adaptation (RAN-API) Synthesis Report
Appendix 5	National Strategy on REDD+
Appendix 6	Indonesia Climate Change Sectoral Roadmap (ICCSR)
Appendix 7	Ministry Decree on Indonesia Climate Change Trust Fund (ICCTF)
Appendix 8	Presidential Regulation on National Greenhouse Gas Inventory System (SIGN)
Appendix 9	Indonesia Voluntary Mitigation Actions

*Appendices 3 to 9 are attached as soft copies (PDF format).

Indonesia: Policy Matrix for Climate Change Program Loan (Phase Ⅰ)

Note 1: This matrix is based on the "National Action Plan Addressing Climate Change" prepared by the Government of Indonesia.
Note 2: All actions are categorized into three groups:
A: legal/regulatory reform (including overall planning), B: institutional/budgetary reform (including specific planning), and C: model transactions.
Note 3: All status of actions are categorized into four groups: Exceed ◎, Attained ○, Substantial Progress △ and unfulfilled ×

Sector	Outcome	CY2007 Actions	Indication of CY2008 Actions	Indication of CY2009 Actions	Responsible Institutions (GOI focal point)
1 Mitigation					
1.1 LULUCF Sector					
1.1.1 Forestry					
	- Carbon absorption capacity is increased through the reforestation activities of 2007-2009 - Carbon dioxide absorbed of 2007 (CO2e/year) = 58.6 million ton (*) - Carbon dioxide absorbed of 2008 (CO2e/year) = 70.2 million ton (*)	A. Reforestation Maintenance of previous planting from Gerhan Program of 2005-2006 (514,488 ha) [C] Replant 722,380 ha of critical forest through The National Movement on Forest and Land Rehabilitation (Gerhan) program in 2007 [C] Develop plan for next Gerhan program [B]	Maintenance of previous planting from Gerhan Program 2006-2007 (722,380 ha) [C]	Maintenance of previous planting from Gerhan Program of 2007-2008 [C]	MOFR (Ms. Indriastuti, Director General, DG of Land Rehabilitation and Social Forestry, MOFR)
			Replant 354,026 ha of critical forest through Gerhan [C]		MOFR (Ms. Indriastuti, Director General, DG of Land Rehabilitation and Social Forestry, MOFR)
			Develop plan for next forest rehabilitation 1.1 million ha [B]	Review mechanism and impacts of GERHAN program (2003-2009) and DAK Bidan Kuhutanan (Special Allocation Fund for Reforestation) to strengthen national forest rehabilitation policy for 2010-2014. [B]	MOFR (Ms. Indriastuti, Director General, DG of Land Rehabilitation and Social Forestry, MOFR)
	*(*) The formula used to estimate CO2 absorption amount is: above-ground net biomass growth (=13) * C.F. (carbon fraction of dry matter) * 44/12 * 4/3*	B. Peat Land Issue a Presidential Instruction no. 2/2007 on Revitalization and Rehabilitation of Peat Land in Central Kalimantan. [C]	Issue a master plan on peat land rehabilitation in Central Kalimantan. [B]	Implement the master plan on peat land: 1. Rehabilitation = 1,600 ha 2. Conservation = *finalize coordination with Central Kalimantan Government's spatial planning in order to convert 308,000 ha production forestry into conservation area* in Central Kalimantan [C]	Bappenas, MOFR, MOA, and Central Kalimantan Government (Mr. Basoeki Karyaatmadja, Director, Center for Forestry Planning & Statistics, MOFR, Mr. Djoko Winarno, Directorate of Forest and Land Rehabilitation Management)

Sector	Outcome	CY2007 Actions	Indication of CY2008 Actions	Indication of CY2009 Actions	Responsible Institutions (GOI focal point)
			Select locations (e.g. national parks, peat land) to conduct REDDI pilot projects. [C]	Conduct REDDI pilot projects [C]	MOFR (Ms. Nur Masripatin, Secretary, Secretariat of Agency for Forestry Research and Development, MOFR)
	Deforestation and degradation is reduced through the scheme of REDDI.	Complete preparatory work to launch REDDI. [A]	Develop incentive and monitoring mechanisms for REDDI. [B]	- Issue Ministerial Decree on Mechanism and Procedures of REDD under UNFCCC Framework. [A] - Prepare and submit Readiness Plan (R-Plan) to FCPF (Forest Carbon Partnership Facility).[B]	MOFR (Ms. Nur Masripatin, Secretary, Secretariat of Agency for Forestry Research and Development, MOFR)
	Forest management is improved.	Issue a Government Regulation (PP) no. 6/2007 on Forest Planning Management and Forest Utilization. [A]	Establish Forest Management Units in 6 provinces. [B]	Establish a Model Forest Management Unit in all provinces.[B]	MOFR, provincial governments (Mr. Soetrisno, Director General of Forest Planning, MOFR)
		Review an existing guideline on forest fire prevention in national parks. [B]	Issue a Forest Fire Prevention Guideline. [B]	Issue Standard Operation Procedures (SOP) and equipment standards of the Forest Fire Prevention Guideline. Socialize the Forest Fire Prevention Guideline at provincial and district levels.	MOFR (Mr. Sonny Partono, Director, Directorate of Forest Fire Control, MOFR)
			Final Draft of Government Regulation on Integrated Watershed Management. [A]	Issue a Government Regulation on Integrated Watershed Management. [A]	MOFR (Dr. Silver Hutabarat, Director of Watershed Management, Directorate General of Land Rehabilitation and Social Forestry, Ministry of Forestry)

Sector	Outcome	CY2007 Actions	Indication of CY2008 Actions	Indication of CY2009 Actions	Responsible Institutions (GOI focal point)
1.2 Energy Sector					
1.2.1 Power Plant					
	Geothermal [Short-term target (by 2009)] The institution of geothermal energy development though private investment is improved. [Long-term target (by 2025)] Installed capacity is increased from 857MW in 2007 to 9,500MW in 2025. Reduction of CO2 emission =approximately 57.9 million t / year	Issue a Government Regulation No.59/2007 on geothermal business activity. (Ar.9, Ar.13, and Ar.33) [A]	Issue Ministerial Regulations on "electricity geothermal base price" and "geothermal permit". [A]	Design a Feed-in-Tariff scheme for IPP-based Geothermal development. [A] Design an exploration fund scheme to promote Geothermal development at exploration stage. [A]	MEMR (Mr. Sugiharto Harsoprayitno, Director of Geothermal Enterprise Supervision and Groundwater Management, MEMR)
		Ministry of Finance Decrees No.177 and 178/2007 on Taxes Incentive [A] Issue a Ministerial Decree No.005/2007 on assignment of preliminary survey [A]	Update a Government Regulation No.1/2007 on Investment Incentive [A]		MOF (Mr. Joko Wiyono, Head of Center for Revenue Policy, Fiscal Policy Office)
	Renewable Energy [Short-term target (by 2009)] The institution of renewable energy development is improved. [Long-term target (by 2025)] The share of renewable energy (including bio fuel but except for geothermal) is increased to at least 10% of total energy supply in 2025. Target for CO2 emission reduction is 17% from BAU (Business as usual) in 2025. (Geothermal and other renewable energy and energy conservation)	Enact the Law no. 30/2007 on Energy (promote renewable energy development). [A]	Expedite establishment of the National Energy Council (Dewan Energi National: DEN). [B]	Finalize a Draft of President Regulation on Guideline of Formulation of National Energy Plan (RUEN) [A]	MEMR (Mr. Purwono, Director General of Energy and Electricity Utilization, MEMR)
			Expedite the issuance of Government Regulations of the Energy Law on "energy tariff and incentive policy of new-renewable energy" and "demand and supply". [A]	Finalize Draft Government Regulations of "New and Renewable Energy Development" and "Energy Demand and Supply" [A]	MEMR (Ms. M. Ratna Ariati, Director of Renewable Energy and Energy Conservation, DGEEU, MEMR)

Sector	Outcome	CY2007 Actions	Indication of CY2008 Actions	Indication of CY2009 Actions	Responsible Institutions (GOI focal point)
1.2.2 Industry, Domestic (household) and commercial					
	[Short-term target] energy intensity is reduced by 1% every year. [Long-term target] Energy elasticity decrease to less than one by 2025. Energy intensity is reduced to 12-18 % by 2025.		Expedite the issuance of the Government Regulations on energy conservation including fiscal incentive and disincentive, following the Energy Law no. 30/2007. [A]	Issue a Government Regulation on "Energy Conservation" [A]	MEMR (Ms. M. Ratna Ariati, Director of Renewable Energy and Energy Conservation, DGEEU, MEMR)
		The energy audit is conducted for 200 firms and industries and energy efficiency label is introduced for CFL. [C]	Continue the energy audit system and 41 firms receive the audit and expand the energy efficiency label system. [C]	Design a mid-term energy audit and efficiency program, including medium term targets, incentive mechanisms, and monitoring and evaluation framework. [A] Conduct energy audit for 40 firms. [C] Issue ministerial regulation(s) for energy efficiency labeling system for CFL, TV, and refrigerator. [A]	MEMR (Ms. M. Ratna Ariati, Director of Renewable Energy and Energy Conservation, DGEEU, MEMR)
			Prepare Road Map of CO2 emission reduction in major sectors such as cement and steel by Energy Conservation based on improved database of energy consumption and CO2 emission. [A]	Issue a ministerial regulation on CO2 roadmap. [A] Design a CO2 roadmap implementation program, including incentive mechanisms, and monitoring and evaluation framework. [A]	MOI (Ms. Endang Supartini, Director of Center for Resource, Environment and Energy R&D, MOI)
			Drafting a Ministerial Regulation on CO2 emission reduction with target amount by sector (e.g. Cement, Steel). [A]		MOI (Ms. Endang Supartini, Director of Center for Resource, Environment and Energy R&D, MOI)
1.2.3 Others					
	Access to energy, including electricity, is enhanced by using renewable energy in rural villages.	Start Energy Self-sufficient Village Program. [C]	Strengthen the coordination and monitoring framework for Energy Self-sufficient Villages Program among various line ministries. [B]	Implement Energy Self-Sufficient Village Program among various line ministries under coordinated monitoring framework. [B]	Coordinating Ministry for Economic Affairs (Ms. Musdalifah, Coordinating Ministry of Economic Affairs)

Sector	Outcome	CY2007 Actions	Indication of CY2008 Actions	Indication of CY2009 Actions	Responsible Institutions (GOI focal point)
2 Adaptation					
2.1 Water Resource Management, Water Supply and Sanitation					
2.1.1 River Management					
	Improving water resource management in integrated manner to strengthen the resilience to the increasing drought and flood risks, specifically in nationally strategic river basin in Java island.	Prepare a Government Regulation (PP) on water resource management. [A] Prepare a Presidential Decree (Perpress) on water resource council. [A]	Finalize a draft of Government Regulation on water resource management. [A]		PU (Mr. Sugiyanto, Director of Water Resources Management, DGWR, PU)
			Issue a Presidential Decree on Water resource council. [A] Prepare a coordinated entity on water resource management (National Water Resource Council). [B]	Establish a coordinated entity on water resource management (National Water Resource Council). [B] Issue Presidential Decree for council menbers nomination to operationalize National Water Resources Council. [B]	PU (Mr. Sugiyanto, Director of Water Resources Management, DGWR, PU) (Mr. Imam Ansholi, Head of secretariat of National Water Resource Council, PU) (Mr. Widagdo, Director of River, Lake and Reservoir, DGWR, PU)
			Prepare integrated water resource management plans (POLA) with climate change assessment in national strategic river basins in Java island. [A]	Finalize integrated water resource management plans (POLA) in national strategic river basin in Java under the coordination of related river basin water resource council. [A]	PU (Mr. Sugiyanto, Director of Water Resources Management, DGWR, PU) (Mr. Imam Santoso, Head of Subdit River Basin Planning)
			Establish river basin management offices 'Balai' and ' Balai Besar'. [B]	Strengthen river Basin management offices 'Balai' and ' Balai Besar'. [B]	PU (Mr. Sugiyanto, Director of Water Resources Management, DGWR, PU) (Mr. Widagdo, Director of River, Lake and Reservoir, DGWR, PU)

Sector	Outcome	CY2007 Actions	Indication of CY2008 Actions	Indication of CY2009 Actions	Responsible Institutions (GOI focal point)
2.1.2 Water Supply and Sanitation					
	Ensure access to sustainable potable water supply and sanitation services for non and under served populations. (Increase the rate of household access to safe water and sanitation facilities from 50 % in 2004 to 68% in 2009, and 65.3% to 75% in 2009.)	Prepare community based water supply and sanitation program (PAMSIMAS) targeted for 5,000 villages with 1,000 replication by 2012. [C]	Develop community based water supply and sanitation facilities in 990 villages under PAMSIMAS [C] Launch "Community based rural water supply and sanitation program (PAMSIMAS) targeted for 5,000 villages with 1,000 replication [C]	Develop community based water supply and sanitation facilities in 1,650 villages under PAMSIMAS. [C]	PU (Directorate of Water Supply Development, Directorate General of Human Settlements, PU)
		Review programs on water supply and sanitation system in capitals of kecamatan (IKK) , and prepare improved investment plan on 85 villages of IKK system expansion. [C]	Review programs on water supply and sanitation system in capitals of kecamatan (IKK) , and prepare improved investment plan on 310 villages of IKK system expansion. [C]	Implement construction of 156 IKKs. [C]	PU (Directorate of Water Supply Development, Directorate General of Human Settlements, PU)
		Develop community based waste water program (SANIMAS) in 128 locations. [C]	Develop community based waste water program (SANIMAS) in 129 locations. [C]	Develop community based waste water program (SANIMAS) in 110 locations. [C]	PU (Mr. Susmono, Director of Environmental Sanitation Development, Directorate General of Human Settlements, PU)
			Issue a Ministerial Decree on strategy and policy for Sanitation Management . [A]	Design operation standard for sewerage service providers including corporate governance, tariff setting, service quality, and technical guidance. [B]	PU (Mr. Susmono, Director of Environmental Sanitation Development, Directorate General of Human Settlements, PU)
		Issue a guideline on community-based 3R (Reduce, Reuse and Recycle) project based on a Ministerial Decree on solid waste management in 2006. [A]	Issue a Ministerial Decree on strategy and policy for Drainage Management. [A]	Issue a Ministerial Decree on Strategy and Policy for Drainage Management. [A]	PU (Mr. Susmono, Director of Environmental Sanitation Development, Directorate General of Human Settlements, PU) (Mr. Danny, Director of Bina Program, Directorate General of Human Settlements, PU)

Sector	Outcome	CY2007 Actions	Indication of CY2008 Actions	Indication of CY2009 Actions	Responsible Institutions (GOI focal point)
2.2 Agriculture					
	Strengthening of institutional and regulating framework to improve resilience of farm production and reduce drought risk.	Issue a Ministerial Decree on irrigation management. [A]	Develop an irrigation asset management information system. [B]	Issue and implement guideline for strengthening operation on irrigation asset management information system. [B]	PU (Mr. Imam Agus Nugroho, Director of Irrigation, DGWR Dr. Agus Suprapto K, Direktorat BINA Program)
		Issue a Ministerial Decree of PU on Water Use Association (P3A) (No.33/PRT/M/2007) [A] Issue a Ministerial Decree on farmer's association (No. 273/2007). [A]	Amend a Ministerial Decree on farmer's association (No. 273/2007) to combine a function with P3A. [A]	Issue and implement guideline to combine P3A and farmers association function and develop pilots in 10 districts. [A]	MOA (Mr. Ir. Hiliman Manan, DG of Land and Water Management) PU (Mr. Imam Agus Nugroho, Director of Irrigation, DGWR)
		Carry out System for Rice Intensification (SRI) practice in 14 provinces (59 packages). [C]	Carry out System for Rice Intensification (SRI) practice in 9 provinces (66 packages). [C]	Carry out System for Rice Intensification (SRI) practice in 21 provinces (111 packages) (MoA) and 9 provinces (60 packages) (PU) [C].	PU (Mr. Imam Agus Nugroho, Director of Irrigation, DGWR) MOA (Mr. Ir. Hiliman Manan, DG of Land and Water Management)
			Carry out the Climate Field School Program (100 units) [C]	Carry out the Climate Field School Program (159 units) [C]	MOA (Mrs. Ir. Ati Wasiati Hamid, Director of Crops Protection, DG of Food Crops, Dr. Sumardjo Gatot Irianto, Director of Water Management, DG of Land and Water Management)
		Establish 'Research and Development Consortium' to strengthen agricultural research capacities responding to Climate Change. [B] Carry out the Climate Field School Program (167 units) [C] Complete a 'Dynamic Cropping Calendar Map' with long term meteorological forecast in Java.[C]	Complete a 'Dynamic Cropping Calendar Map' with long term meteorological forecast in Sumatra. [C]	Complete a ' Semi Dynamic Cropping Calendar Map' with long term meteorological forecast in Sulawesi and Kalimantan. [C]	MOA (Dr. Ir. Irsal Las, Head / Director General, Indonesian Center for Agricultural Land Resources Research and Development)

Sector	Outcome	CY2007 Actions	Indication of CY2008 Actions	Indication of CY2009 Actions	Responsible Institutions (GOI focal point)
3 Cross-Sectoral Issues					
3.1 Understanding the Impact of Climate Change					
	The First National Communication, submitted to the UNFCCC in 1999, is updated.	Form a working group to revise the National Communication. [B]	Implement studies for the second National Communication. [B]	Finalize draft of the second National Communication. [B]	KLH (Ms. Sulistyowati, Assistant Deputy for Climate Change Impact Control)
3.2 Mainstreaming Climate Change in the National Development Program					
	Policy coordination on climate change is enhanced.	Issue a National Action Plan Addressing Climate Change. [A]	Establish a steering committee for climate change program coordination based on a Ministerial Decree. [A]	Fully operationalize the steering committee for coordinating climate change program. [B]	Bappenas (Mr. Edi Effendi Tedjakusuma, Director of Environment)
	Policies to respond to climate change are linked to the national budget.	Draft a National Development Planning Response to Climate Change (Yellow Book). [A]	Finalize "the Development Plan Response to Climate Change" Book . [A]	Draft the Medium Term National Development Plan for 2010-2014 that integrate program action and measures to respond to climate change [A].	Bappenas (Mr. Edi Effendi Tedjakusuma, Director of Environment)
			Include actions to respond to climate change in the Annual Government Work Plan for 2009. [A]	Conduct Comprehensive and Sectoral assessment (Road Map) on climate change planning and programming. [A]	Bappenas (Mr. Edi Effendi Tedjakusuma, Director of Environment)
3.3 Improving Spatial Planning					
	Spatial plans are improved to incorporate climate change concern.	Enact the Law no. 26/2007 on Spatial Management. [A]	Enact the Government regulation No. 26/2008 on National Spatial Plan [A]	Continue monitoring and evaluating the implementation of National Spatial Plan to Provincial and Regency/City Spatial Plan [B]	PU (Mr. Iman S. Ernawi, Directorate General, Directorate General of Spatial Planning, PU)
			Monitoring and evaluating the implementation of National Spatial Plan to Provincial and Regency/City Spatial Plan. [B]		PU (Mr. Iman S. Ernawi, Directorate General, Directorate General of Spatial Planning, PU)
	Spatial plan network at the national level is enhanced.	Issue Presidential Regulation no. 85/2007 on Spatial Data Network. [A]	Improve/computerize spatial plan data managed by data centers. [C]	Start developing a spatial plan database, connecting relevant central governmental agencies. [C]	Bakorsurtanal (Mr. Agus Prijanto, head, bureau of planning and general)

Sector	Outcome	CY2007 Actions	Indication of CY2008 Actions	Indication of CY2009 Actions	Responsible Institutions (GOI focal point)
3.4 CDM					
	To meet the total number of CDM projects stipulated in National Action Plan	National Commission for Clean Development Mechanism (NC-CDM) approved 13 CDM project in 2007. [C]	Continue to approve and implement CDM projects to achieve NAP target [C]	Continue to approve and implement CDM projects 20 CDM projects a year [C]	KLH (Ms. Sulistyowati, Assistant Deputy for Climate Change Impact Control) DNA may move to DNPI/National Council on Climate Change
3.5 Co-benefits					
	Planning/Implementation capacity of co-benefit approach is enhanced through model transactions.	Conclude a Joint Statement, promoting the co-benefits approach, between GOI and GOJ. [A]	Identification/survey on 5 cities and conducting 2 F/S on 2 selected cities [C]	Complete F/S on selected locations.	KLH (Ms. Sulistyowati, Assistant Deputy for Climate Change Impact Control)
3.6 Fiscal Incentives					
	Develop fiscal incentive framework for GHG emission reduction with promoting private led investment		Conduct study on medium and long term fiscal incentives (tax and non tax) and appropriate energy price system for energy diversification and conservation. [C]	Prepare comprehensive fiscal incentive study as a basis of tax and non-tax reform for GHG emission reduction in geothermal sector [C]	MOF (Mr. Askolani, Head, Fiscal Policy Office)
3.7 Early Warning System					
	Data and information regarding meteorological early warning system available	Installed 47 Automatic Weather Stations (AWS). [C] Installed 7 Weather RADARs. [C]	Installed 7 Automatic Weather Stations (AWS). [C]	Install 19 Automatic Weather Stations (AWS). [C]	BMG (Dr. Andi Eka Sakya, Executive Secretary)
			Installed 4 Weather RADARs. [C]	Install 8 weather RADARs. [C]	BMG (Dr. Andi Eka Sakya, Executive Secretary)
			Installed 20 Digital raingauges. [C]	Install 11 Digital rain gauges. [C]	BMG (Dr. Andi Eka Sakya, Executive Secretary)

Indonesia: Climate Change Program Loan (Phase II)
(Policy Matrix, as of April 21st, 2010)

Sector	Outcome Area	Prior Actions to be recognized (2007-2009)	Indication of CY2010 Actions	Responsible Institutions	Further Indication of CY2011 and 2012 Actions
1 Key Policy Issues (Upstream Strategy)					
1.1 Mainstreaming Climate Change in the National Development Program					
	Climate change program is implemented in all related ministries towards the achievement of national target (26% GHG emission reduction from BAU in 2020)	National Action Plan Addressing Climate Change, National Council on Climate Change by Presidential Decree, and "Development Plan Response to Climate Change." were issued. The steering committee for climate change program loan coordination was established. Comprehensive and Sectoral Assessment and Planning Process (Road Map) on climate change were prepared.	Finalize Indonesia Climate Change Sectoral Roadmap (ICCSR).	BAPPENAS	Prepare Nationally Appropriate Mitigation Action (NAMA) in accordance with midterm development plan (RPJM) and ICCSR. Draft provincial action plan for contributing to 26% reduction. Incorporate climate change program into regional midterm development plan (RPJMD) at Kabupaten level.
			Issue a presidential decree on National Action Plan for 26% GHG voluntary reduction.	CMPW CMEA BAPPENAS	
			Submit mitigation actions and commitments under Copenhagen Accord to UNFCCC, based on commitments by the president, policy documents and policy dialogues.	BAPPENAS DNPI	
			Revise a "National Action Plan Addressing Climate Change (2007)".	DNPI	
1.2 Financing Scheme and Policy Coordination for Climate Change					
	Policy coordination on climate change is enhanced and linked to National Budget and Planning processes.	Climate actions were incorporated into Medium Term Development Plan (and annual and longer term budgets). Indonesia Climate Change Trust Fund (Oct 2009) was launched.	Implement innovative funding mechanism for climate change through the Indonesia Climate Change Trust Fund (ICCTF).	BAPPENAS	Continue to support the funding mechanism for climate change projects under the Indonesia Climate Change Trust Fund (ICCTF).
			Conduct a study on the implementation possibility of Performance Based Budgeting (PBB), for programs and policies of line ministries related to climate change.	MOF	Finalize the design of DAK for Climate Change or special incentives concept for local government
			Improve the existing design Climate Change DAK or special incentives concept for local government	Bappenas, MOF	
		National Disaster Management Agency (BNPB) was established, and National Action Plan for Disaster Risk Reduction (NAP-DPR 2010-2012) was finalized. Institutional strengthening of BNPP was initiated in 2008, and Incorporated mainstreaming of DRR in the context of climate change adaptation into the medium term development plan (RPJM, 2009) was done.	Continue the efforts to establish Local Disaster Management Agency (BPBD) in all provinces	BNPB	2011: Implement Disaster Risk Reduction (DRR) program activities according to the National Action Plan for DRR 2012: Implement comprehensive risk financing framework combining mechanisms including reserve (on-call) budget, stand-by financing, and weather derivatives.
1.3 GHG Emission & Absorption Measurement					
	Monitoring mechanism for carbon emission and absorption is established through National GHG Inventory System.	Finalize Second National Communication to UNFCCC.	Submit main report of 2nd National Communication to UNFCCC.	KLH	Implement SIGN with the close coordination among relevant institutions and prepare for the National GHG Inventory.
			Develop the GHG Inventory System (SIGN) through official process and design an Indonesian national MRV System	KLH	

Sector	Outcome Area	Prior Actions to be recognized (2007-2009)	Indication of CY2010 Actions	Responsible Institutions	Further Indication of CY2011 and 2012 Actions
2 Mitigation					
2.1 Forestry					
2.1.1 Forest Management and Governance					
	Forest governance and management is improved through the establishment of improved rules on FMUs, financial scheme for local governments, and timber legality.	Government Regulation on Forest Planning Management and Forest Utilization was issued. 29 model FMUs are planned for 27 provinces, and 13 were approved by the Minister of Forestry.	Design norms, standards and procedures on how Forest Management Units (FMUs) manage forests. (Ministerial Decree was issued in 2010 and will be applied to the newly established FMUs)	MOFR Local Gov'ts MOHA	Strengthen the regulatory framework for FMU management institutions at local level for conservation, protection, and production FMUs (implementing and technical guidance)
			Design a concept on intergovernmental transfer DAK mechanism to finance and improve the incentives for local governments through strengthening forest management activities toward emissions reductions.	MOF MOFR	Formalize intergovernmental transfer mechanism to finance local government forest activities. 2012: Evaluate and improve intergovernmental transfer mechanism to finance local government forest activities.
		Ministerial regulations was issued for Timber Legality Verification System (Sistem Verifikasi Legalitas Kayu, SVLK) for establishing a national timber legality standard and a system for verification and monitoring to assist in reducing illegal logging and forest destruction.	Implement and monitor performance of GOI regulation on timber legality. Assess capacity for oversight, certification and monitoring in national standards agency.	MOFR	Strengthen the implementation of regulatory framework to enhance on going implementation of GOI regulation on timber legality by monitoring and evaluation.
2.1.2 Peatland Conservation					
	An institutional framework to conserve and restore peatland is improved.	The master plan on peat land rehabilitation in Central Kalimantan was issued. National budget for implementation on the master plan in Central Kalimantan has been allocated (around 739 Million Rp. in national budget). BPDAS has completed the annual planning for rehabilitation.	Coordinate among ministries to control peatland emissions implementation under the framework of presidential regulation.	Menko Ekon Bappenas	Issue a presidential regulation which includes special measures for peatland conservation and peatland water management to minimize carbon emissions.
			Implement key steps in national multi-sector policy dialogue (seminar proceedings, policy principles) toward establishing a legal framework for the national strategy for lowlands with the focus on balancing development and conservation considering peatlands as major source of GHG emissions.	MOFR PU MOA KLH	
2.1.3 REDD					
	Emissions from deforestation and forest degradation is reduced through the implementation of a national REDD framework	National Readiness Program for REDD was launched; Completed preparatory analysis, issued consolidated report, developed regulatory framework and selected locations, and initiated REDDI pilot projects (with several donors and NGOs). The GOI has submitted a Readiness Program Proposal to the FCPF and initiated a REDD program with UN REDD Support (FAO-UNDP-UNEP)	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.	MOFR MOF	Establish a national registry of REDD to track implementation of REDD activities and payments in a national carbon registry.
			Conduct/implement REDD demonstration activities (at least 3), specify results in specific locations and partners.	MOFR	Assess & develop framework for forest fiscal management, including incentives for regional stakeholders.
					Study the possibility to establish an accreditation system to place a premium over REDD projects conserving biodiversity.
2.1.4 Afforestation and Reforestation					
	Carbon sink capacity is increased through reforestation activities.	Maintenance of previously planted area and replant in critical forest through Gerhan were done. Develop plan and review mechanism and impacts of GERHAN program for next forest rehabilitation activities were done.	Rehabilitation of protected areas consisting replanting of 100 thousand ha and develop technical design for another 100 thousand ha.	MOFR	Design an improved monitoring system of reforestation program (with supporting from development partners will be consulted with Ministry of Forestry) 2012: Design new procedure for rehabilitation monitoring in place, covering growth of trees along time.
				MOFR	Maintain plantation areas conducted in 2010.
			Issue a ministerial decree on forest land allocation for timber plantation (HTI and HTR).	MOFR	Initiate steps to simplify regulations and taxation to reduce complexity for forest plantation and climate change investment by the private sector.

Sector	Outcome Area	Prior Actions to be recognized (2007-2009)	Indication of CY2010 Actions	Responsible Institutions	Further Indication of CY2011 and 2012 Actions
2.2 Energy					
2.2.1 Renewable Energy Development					
	Improve energy security and reduce future GHG emissions from electricity generation through new geothermal projects within an improved policy framework for private sector participation.	Government regulation on geothermal business activity, MOF decrees on Taxes incentive, and MEMR decree on assignment of preliminary survey were issued. Ministerial Regulation No. 32 year 2009 on Purchase Standard Price of Electricity Power by PT PLN from Geothermal Electricity Power Station was issued on December 4, 2009	Improve policy framework design for promoting geothermal development to facilitate arrangements / deals between developer and off-taker. Identify financing needs to mitigate upstream risk of geothermal projects.	Menko Ekon MOF Men PAN (supported by MEMR)	Continue to improve policy framework design to promote geothermal development, and provide exploration fund to mitigate upstream risk for eastern part of Indonesia.
			Issue draft regulation to clarify the scheme of compensation for the incremental cost of geothermal electricity to off-taker.	MOF (MEMR)	
			Demonstrate progress by signing PPAs (at least 1) of geothermal projects.	MEMR MOF Bappenas (PLN)	
	The promotion of renewable energy development is improved by monitoring, evaluating and revising the new regulations.	The Law no. 30/2007 on Energy (promote renewable energy development) was enacted. National Energy Council (Dewan Energi National: DEN) was established. Ministerial Regulation No31/2009 on the purchasing price of electricity from renewable energy was issued in Nov. 2009.	Ministerial regulation (MOF) No. 21/2010 (PPH) and No. 24/2010 (PPN DTP) on incentives for renewable energy development was issued in January 2010.	MEMR MOF	Review the impact of Ministerial Regulation No.31/2009 and propose a new or revised regulation to promote renewable energy development further and more effectively, and Draft (or issue) a regulation on improved framework for renewable energy development.
			Presidential Decree No. 4, 2010 on assignment to PLN to conduct acceleration of power plant development using renewable energy, coal, and gas has been issued on January 8, 2010.	MEMR MOF	
2.2.2 Energy Efficiency					
	GHG emissions are reduced (or strategies for reducing GHG emissions are formulated) by enhanced energy efficiency in energy intensive sectors through the use of new technology and the rehabilitation, renovation and replacement of existing facilities.	(no prior action from 2007-2009 under CCPL)	Conduct a study on a national framework for emission reductions in the cement sector.	MOI MEMR	Replicate the same approach to other industrial sectors Conduct a study to introduce new and more energy efficient technology, and survey the potential of energy efficient technology for electricity generation.
	Demand side management becomes a major part of government regulations and eventually contribute to fiscal budget management.	Ministerial Regulation No. 70 year 2009 on Energy Conservation was issued on December 16, 2009. National system of energy audits for major firms in key sectors were developed and implemented.	Prepare a master plan for energy conservation including the energy efficiency standards, energy audit program with a monitoring and evaluating framework, of fiscal incentives options, and the industry energy conservation, with the sectoral approach, with MEMR and MOI.	MEMR MOF MOI	Start to implement the master plan of energy conservation, and start the implementation of the programs in the master plan, including energy efficiency standards, energy audit program with a monitoring and evaluating framework, of fiscal incentives options, and the industry energy conservation.
2.2.3 Pricing					
	Energy consumption is better controlled by a more cost-oriented pricing mechanism, contributing to reducing both GHG emissions and energy subsidies	(no prior action from 2007-2009 under CCPL)	Finalize a road map for improving subsidy policy of electricity	MEMR MOF (PLN)	Preparation for Implementation actions based on the road map, including the regulation.

Sector	Outcome Area	Prior Actions to be recognized (2007-2009)	Indication of CY2010 Actions	Responsible Institutions	Further Indication of CY2011 and 2012 Actions
2.3 Transportation					
2.3.1 Modal Shifting					
	The increase rate of car users remains at a low level, and is less than that of users of public transportation.	(no prior action from 2007-2009 under CCPL)	Develop BRT (Bus Rapid Transit) in 2 cities : Tangerang, and Sarbagita Area (Denpasar, Badung, Gianyar, Tabanan) Bali.	MOT	Continue development BRT in other cities.
			Improve pedestrian facilities in Bukit Tinggi and develop bicycle lane in Sragen.	MOT	Continue development of pedestrian facilities and bicycle lanes in other cities.
2.3.2 Traffic Management					
	Traffic management is enhanced enough to avoid deteriorating traffic congestion.	(no prior action from 2007-2009 under CCPL)	Develop ATCS (Area Traffic Control System) in Bogor and Surakarta	MOT	Continue development ATCS in major cities.
2.3.3 Better Combustion Engines and Fuels					
	Using better combustion engines and fuels prevails.	(no prior action from 2007-2009 under CCPL)		MOT	Install converter kit for public transportation 1000 unit/year in major cities
3 Adaptation					
3.1 Climate Forecasting and Impact and Vulnerability Assessment					
	Strengthening of institutional and regulating framework.	73 Automatic Weather Stations, 19 weather RADARs, and 31 Digital rain gauges were installed. Study for Ocean Carbon, and marine and coastal vulnerability to sea level rise were conducted.	Start developing the climate modeling as the basis of the development of impact and vulnerability assessment.	BMKG	Prepare Vulnerability Map in priority area.
			Implement INAGOOS to cope with climate change.	MMF	Implement INAGOOS into operational oceanography
			Prepare an academic paper for Government Regulation to the criteria of the impact of climate change.	KLH DNPI	Prepare a National Action Plan of Adaptation (NAPA) for Climate Change based on impact assessment (KLH, DNPI, BAPPENAS, and BMKG)
3.2 Water Resources Sector					
	Improving water resource management in integrated manner to strengthen the resilience to the increasing drought and flood risks, specifically in nationally strategic river basin in Java island.	Presidential Decree on Water resource council was issued, and the National Water Resource Council (NWRC) has been established and met several times. Based on that, integrated water resource management plans (POLA) with climate change assessment in national strategic river basins in Java island were prepared, and 3 POLA are finalized and proceeded for Ministerial Decree (Bengawan Solo, Brantas and Cimanuk river basins).	Continue to implement strategic assessment of the water future of Java, and prepare an action plan for priority interventions incorporating climate change, urbanization, economic development and food security to become an integral part of the River Basin Strategic Water Management Plans (Pola WS) and the framework for the River Basin Master Plans, with the national target of 2010 : completing 12 provincial water resource council, 12 Coordination Team for Water Resources Management in River Basins (TKPSDA) and 8 Integrated Water Resources Management Plan (POLA).	PU	Complete master plans for the Java River Basins which include climate change adaptation measures, by enacting ministerial decree.

Sector	Outcome Area	Prior Actions to be recognized (2007-2009)	Indication of CY2010 Actions	Responsible Institutions	Further Indication of CY2011 and 2012 Actions
3.3 Agriculture Sector					
	Strengthening of institutional and regulating framework to improve resilience of farm production and reduce drought risk.	Ministerial Decree on irrigation management. Develop an irrigation asset management information system was issued. System for Rice Intensification (SRI) practice (total: 345 packages) and the Climate Field School Program (total: 468 units) were carried out.	Evaluate performance, then improve and scale up actions for adaptation in agriculture including climate field school, System for Rice Intensification (SRI), and to enforce land development and management without burning as part of an overall plan (Minister of Agriculture Decree No. 26/Permentan/OT.14/2/2007).	MOA	Continue the 2010 progress to improve and scale up actions for adaptation in agriculture including climate field school, System for Rice Intensification (SRI), and to enforce land development and management without burning as part of an overall plan (Minister of Agriculture Decree No. 26/Permentan/OT.14/2/2007)
3.4 Marine and Fisheries Sector					
	Strengthening of institutional and regulating framework to manage coastal zones and small island.	The Indonesian National Plan of Actions (NPOA) of Coral Triangle Initiatives on Coral reef, fisheries and food security (CTI-CFF) was launched, and detailed NPOA was improved. Manage and Rehabilitate coral reef in 15 districts within 8 provinces (COREMAP) were carried out.	Develop a strategy for coastal community resilience to cope with climate change, including the plan of climate resilient village in 8 districts in northern coast java, implementing study on coastal vulnerability in relation to sea level rise in Java and Bali, research on the variability of CO2 Flux in Banten Bay.	MMF	Implement the strategy for coastal community resilience to cope with climate change.

Republic of Indonesia

Presidential Regulation of The Republic of Indonesia No. 61 Year 2011

on

The National Action Plan
for Greenhouse Gas Emissions Reduction

PRESIDENT OF
THE REPUBLIC OF INDONESIA

PRESIDENTIAL REGULATION OF THE REPUBLIC OF INDONESIA
NUMBER 61 YEAR 2011
ON
THE NATIONAL ACTION PLAN
FOR GREEENHOUSE GAS EMISSIONS REDUCTION

WITH THE GRACE OF GOD THE ALMIGHTY

THE PRESIDENT OF THE REPUBLIC OF INDONESIA,

Considering :

a. that the Indonesian geographic position is very vulnerable to the impacts of climate change so that it is necessary to make every effort to cope with the problems through climate change mitigation;

b. that within the framework of following up the agreement on Bali Action Plan at the 13th Conference of Parties (COP) of the United Nations Frameworks Convention on Climate Change (UNFCCC) and the results of COP-15 in Copenhagen and those of COP-16 in Cancun, and of fulfilling the commitment of the Indonesian government in the G-20 meeting in Pittsburg to reduce greenhouse gas emissions by twenty six percent (26%) on its own and by forty one percent (41%) if it receives international aid, by the year of 2020 from the condition without any action (business as usual/BAU), therefore it is necessary to take measures to reduce greenhouse gas emissions;

c. that under the considerations as specified in the points of letter a and letter b it is necessary to enact the Presidential Regulation regarding the National Action Plan for Greenhouse Gas Emissions Reduction;

In view of...

In view of :

1. Article 4 paragraph (1) of the 1945 Constitution of the Republic of Indonesia;

2. Law No. 6 Year 1994 on the Ratification of the United Nations Frameworks Convention on Climate Change (State Gazette of the Republic of Indonesia of the Year 1994 under No. 42, Supplement to the State Gazette of the Republic of Indonesia under No. 3557);

3. Law No. 17 Year 2003 on the State Finances (State Gazette of the Republic of Indonesia of the Year 2003 under No. 47, Supplement to the State Gazette of the Republic of Indonesia under No. 4286);

4. Law No. 17 Year 2004 on the Ratification of Kyoto Protocol - on United Nations Frameworks Convention on Climate Change (State Gazette of the Republic of Indonesia of the Year 2004 under No. 72, Supplement to the State Gazette of the Republic of Indonesia under No. 4403);

5. Law No. 25 Year 2004 on the National Development Planning System (State Gazette of the Republic of Indonesia of the Year 2004 under No. 104, Supplement to the State Gazette of the Republic of Indonesia under No. 4421);

6. Law No. 17 Year 2007 on the National Long-term Development Plan (RPJP) 2005 - 2025 (State Gazette of the Republic of Indonesia of the Year 2007 under No. 33, Supplement to the State Gazette of the Republic of Indonesia under No. 4700);

7. Law No. 31 Year 2009 on Meteorology, Climatology and Geophysics (State Gazette of the Republic of Indonesia of the Year 2009 under No. 139, Supplement to the State Gazette of the Republic of Indonesia under No. 5058);

8. Law...

8. Law No. 32 Year 2009 on Environmental Protection and Management (State Gazette of the Republic of Indonesia of the Year 2009 under No. 140, Supplement to the State Gazette of the Republic of Indonesia under No. 5059);

9. Government Regulation Number 10 Year 2011 on the Procedures for Foreign Loans Procurement and for Grants Acceptance (State Gazette of the Republic of Indonesia of the Year 2011 under No. 23);

10. Presidential Regulation No. 5 Year 2010 on the National Medium- term Development Plan (RPJMN) 2010 - 2014;

HAS DECIDED:

To enact : THE PRESIDENTIAL REGULATION ON THE NATIONAL ACTION PLAN FOR GREENHOUSE GAS EMISSIONS REDUCTION.

Article 1

In this Presidential Regulation, meant by:

1. National Action Plan for Greenhouse Gas Emissions Reduction hereinafter referred to as RAN-GRK is a work plan document for the implementation of various activities both directly and indirectly to reduce greenhouse gas emissions in accordance with the national development targets.

2. Regional Action Plan for Greenhouse Gas Emissions Reduction hereinafter referred to as "RAD-GRK" is a work plan document for the implementation of various activities both directly and indirectly to reduce greenhouse gas emissions in accordance with the regional development targets.

3. The Greenhouse Gasses hereinafter referred to as GHG are the gasses contained in the atmosphere both naturally and anthropogenically which absorb and re-emit infrared radiation.

4. GHG emissions are the discharge of GHGs into the atmosphere in a certain area at a certain period of time.

5. The level of GHG emissions is the amount of annual GHG emissions.

6. Climatic/climate change is the change in the climate caused either directly or indirectly by human activities so as to cause global change in the atmospheric composition and in the natural climatic variability observed in a certain comparable period of time.

7. Mitigation of climate change is the effort to control and to reduce the risks of the impacts of climate change through activities that may reduce the emissions and/or increase the absorption of GHGs from various emission sources.

8. Core activities are those having a direct impact on the reduction in GHG emissions and on the absorption of GHGs.

9. Supporting activities are those having no direct impact on the reduction in GHG emissions, but supporting the implementation of the core activities.

Article 2

(1) RAN-GRK consists of core and supporting activities.

(2) The activities of RAN-GRK comprise the following matters:
a. Agriculture;
b. Forestry and peat land;
c. Energy and transportation;
d. Industry;
e. Waste management;
f. Other supporting activities.

(3) RAN-GRK as specified in the Attachment I and Attachment II constitutes inseparable part of this Presidential Regulation.

Article 3

RAN-GRK constitutes a guide to:

a. Ministry/Institution to conduct the planning, implementation, monitoring and evaluation of the action plan to reduce the GHG emissions.

b. Local government in the compilation of RAD-GRK.

Article 4

RAN-GRK will become a reference to the public and businesspeople in the planning of and in the reduction in the GHG emissions.

Article 5...

Article 5

(1) The Minister/ institutional Head conducts RAN-GRK in accordance with their respective duties and functions.

(2) The implementation and monitoring of RAN-GRK, as specified in the paragraph (1) are coordinated by the Coordinating Minister for Economic Affairs.

(3) The implementation of RAN-GRK in each ministry and/or institution is further regulated by the Minister and/or institutional Head in accordance with their respective duties and powers.

Article 6

(1) In order to reduce GHG emissions in the respective provincial areas, the Governors should develop RAD-GRK.

(2) The compilation of RAD-GRK will refer to the following matters:
   a. RAN-GRK as specified in the Article 2; and
   b. Regional development priority.

(3) The compilation of RAD-GRK is completed and enacted by a Gubernatorial Regulation not later than twelve (12) months effective from the enactment of this Presidential Regulation.

(4) RAD-GRK, as specified in the paragraph (3) is submitted to the Minister for National Development Planning and/or Head of BAPPENAS and the Minister of Home Affairs.

Article 7

The compilation of RAD-GRK is facilitated by the Minister of Home Affairs together with the Minister for National Development Planning and/or Head of BAPPENAS and the Minister of the Environment.

Article 8

The guidelines to the compilation of RAD-GRK are enacted by the Minister for National Development Planning and/or Head of BAPPENAS not later than three (3) months effective from the enactment of this Presidential Regulation.

Article 9

(1) RAN-GRK may be reviewed periodically in accordance with the national need and international dynamic development.

(2) Review on RAN-GRK is conducted by the Ministry/Institution and coordinated by the Minister for National Development Planning/ Head of BAPPENAS.

(3) The results of the review of RAN-GRK is reported by the Minister for National Development Planning/ Head of BAPPENAS to the Coordinating Minister for Economic Affairs with a copy thereof forwarded to the Coordinating Minister for People's Welfare.

(4) The results of the review may be made the basis for adjustment of RAN-GRK.

Article 10...

Article 10

(1) The Minister and/or Institutional Head report(s) the activities of RAN-GRK, as specified in the Article 5 to the Coordinating Minister for Economic Affairs with a copy forwarded to the Coordinating Minister for People's Welfare, the Minister for National Development and Planning and/or Head of BAPPENAS and the Minister of the Environment periodically at least once (one time) a year or from time to time when required.

(2) Coordinating Minister for Economic Affairs reports the implementation of an integrated RAN-GRK to the President at least once (one time) a year form time to time when required.

Article 11

The funding of RAN-GRK as specified in the Article 2 is derived from the State Revenues and Expenditures Budget (APBN), Regional Revenues and Expenditures Budget (APBD) and other legal and unbinding sources in accordance with the prevailing laws and regulations.

Article 12...

PRESIDENT OF
THE REPUBLIC OF INDONESIA

Article 12

This Presidential Regulation comes into force as of the date of enactment.

Enacted in Jakarta

On September 20, 2011

PRESIDENT OF THE REPUBLIC OF INDONESIA

[Signed]

DR. H. SUSILO BAMBANG YUDHOYONO

True copy of the original

SECRETARIAT OF THE CABINET OF RI

Deputy, Economic Affairs

[Signed]

Retno Pudji Budi Astuti