

**REPUBLIC OF INDONESIA  
CLIMATE CHANGE PROGRAM LOAN (III)  
MONITORING SUPPORT ACTIVITIES**

**FINAL REPORT  
(SUMMARY)**

**OCTOBER 2011**

**JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
GLOBAL GROUP 21 JAPAN, INC. (GG21)  
INSTITUTE FOR GLOBAL ENVIRONMENTAL STRATEGIES (IGES)**

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## *Abbreviations*

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ADB	Asian Development Bank
AFD	Agence Française de Développement
BAPPENAS	The National Development Planning Agency, Republic of Indonesia
BMG	The Meteorology and Geophysics Agency
BMKG	The Agency of Meteorology, Climatology and Geophysics, Republic of Indonesia (renamed from BMG in September 2008)
BPBD	Local Disaster Management Agency, Republic of Indonesia
CC-DAK	Climate Change Special Allocation Fund
CCPL	Climate Change Program Loan
CCT	Clean Coal Technology
CFS	Climate Field School
CMEA	Coordinating Ministry for Economic Affairs, Republic of Indonesia
CMPW	Coordinating Ministry for People's Welfare, Republic of Indonesia
CO <sub>2</sub>	Carbon Dioxide
COP	Conference of the Parties
COREMAP	Coral Reef Rehabilitation and Management Program
CVI	Coastal vulnerability index
CY	Calendar Year
DAK	Dana Alokasi Khusus (Special Allocation Fund)
DEN	National Energy Council
DKI	Special Allocation Fund (Dana Alokasi Khusus)
DME	Energy Self-Sufficient Village Program
DNPI	National Council on Climate Change
FIT	Feed-in Tariff
FMU	Forest Management Unit
FNC	The First National Communication to the United Nations Framework Convention on Climate Change
F/S	Feasibility Study
FY	Fiscal Year
GEF	Global Environment Facility
GG21	Global Group 21 Japan, Inc.
GHG	Greenhouse Gas
GOF	The Government of France
GOI	The Government of Indonesia
GOJ	The Government of Japan
ha	Hectare
HTI	Industrial Forest Plantation (Hutan Tanaman Industri)

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HTR	Community Forest Plantation (Hutan Tanaman Rakyat)
ICCSR	Indonesia Climate Change Sectoral Roadmap
ICCTF	Indonesia Climate Change Trust Fund
IGES	Institute for Global Environmental Strategies
INAGOOS	Indonesia Global Ocean Observing System
IPP	Independent Power Producer
Jabodetabek	Combined area of <u>Jakarta</u> , <u>Bogor</u> , <u>Depok</u> , <u>Tangerang</u> , and <u>Bekasi</u>
JICA	Japan International Cooperation Agency
KEN	National Energy Policy
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
MOHA	Ministry of Home Affairs, Republic of Indonesia
MOI	Ministry of Industry, Republic of Indonesia
MOPW	Ministry of Public Works, Republic of Indonesia
MRV	Measurement, Reporting and Verification
MW	Megawatt
NAMA	Nationally Appropriate Mitigation Actions
NAPA	National Adaptation Programme of Action
PBB	Performance Based Budgeting
PLN	State Electricity Company, Republic of Indonesia
POLA	Integrated Water Resources Management Patterns and Plans (Pola Pengelolaan Sumber Daya Air)
PP	Government Regulations
PPA	Power Purchase Agreement
RAN-GRK	National Action Plan on Green House Gas Emission 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
RIKEN	National Master Plan for Energy Conservation

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RKP	Government Action Plan
RPJMN	National Medium-Term Development 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
TKPSDA	Water Resource Management Coordination Team
TTM	Technical Committee / Technical Task Force Meeting (of CCPL)
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
WS	River Basin (Wilayah Sungai)

## *Executive Summary*

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### **Overview**

The Government of the Republic of Indonesia has actively addressed climate change issues through the introduction of a number of laws, plans, and guidelines; as well as implementing mitigation and adaptation measures on the ground level. Furthermore, the Government of Indonesia (GOI) has played an important role in the international negotiations on the climate change issues, particularly through hosting the 13th Conference of Parties of the United Nations Framework Conventions for Climate Change (UNFCCC-COP13) in 2007 at Bali.

In order to encourage the GOI's efforts of institutional reforms and on-the-ground activities to strengthen climate change policies, the Government of Japan (GOJ) decided to introduce a large cooperation program. In 2008 the GOJ and the GOI agreed to launch Indonesia Climate Change Program Loan (CCPL). In the same year the Government of France (GOF) also decided to provide a co-financing loan through Agence Française de Développement (AFD). Multilateral development institutions also joined; the World Bank in 2010 and the Asian Development Bank (ADB) in 2011.

CCPL supports the GOI to mainstream climate policies through the following mechanisms:

- 1) Large scale general budget support is provided so as to encourage further mainstreaming of climate change policies;
- 2) Policy dialogues among the GOI and development partners are periodically held to share information on latest status of climate change policies in Indonesia e.g., progress challenges, and future directions of necessary policy actions; and
- 3) Related cooperation projects/programs could also be examined and provided on the basis of above dialogues.

Accurate understanding of current conditions is inevitable to effectively implement above mechanisms. The GOI and development partners prepared two means to grasp the issues, progress, and challenges of climate change policies: the "Policy Matrix" listing targets/actions of climate change policies selected from the GOI's development plans; and the joint monitoring activity on the progress and attainments of targets/actions in the matrix.

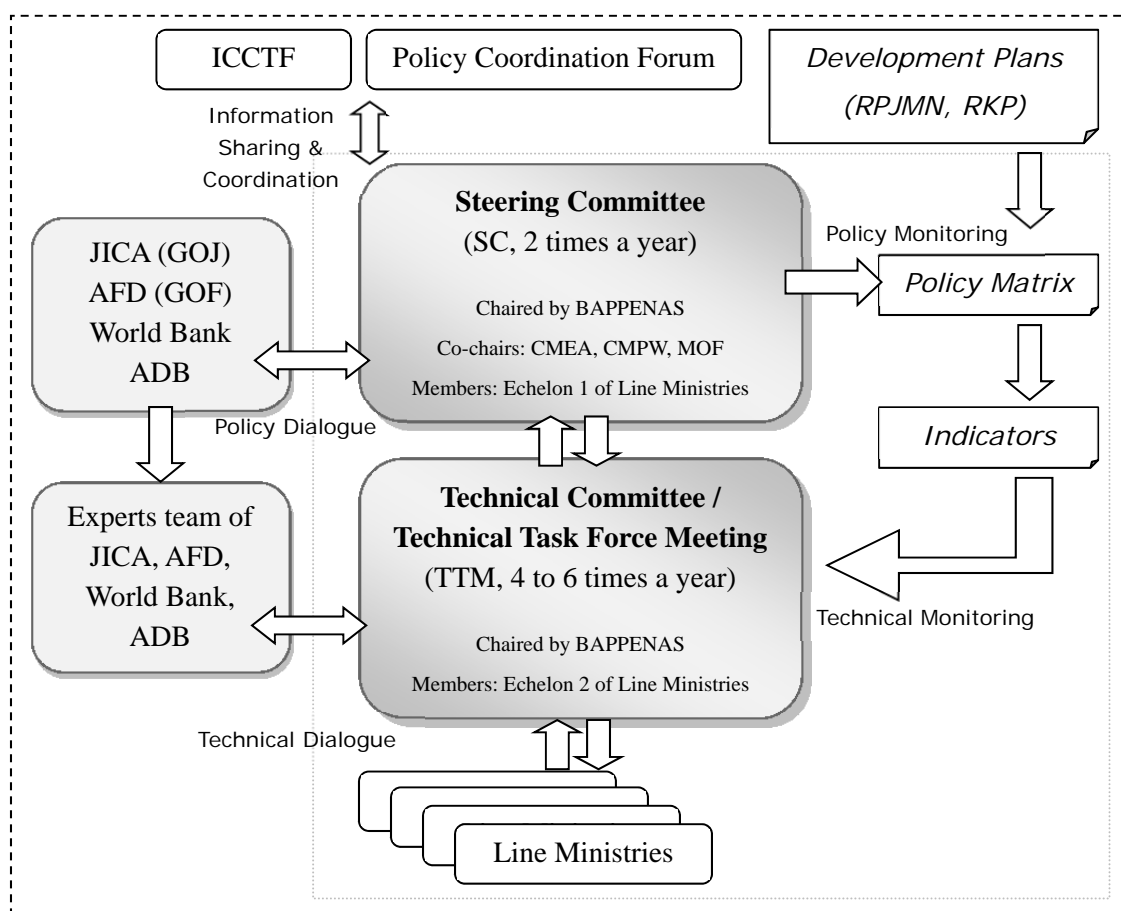


Figure 1 : Coordination Structure of CCPL

From 2007 to 2009, the climate change policies of following sectors were covered in the Policy Matrix: Land Use, Land Use Change and Forestry (LULUCF); Energy; Water Resource; Water Supply and Sanitation; Agriculture; Marine, Coral, and Fisheries; Disaster Management and Disaster Risk Reduction; and Crosscutting issues. During the period the GOI has achieved a notable progress toward strengthening of climate change policies. Just to name a few: *The Indonesia Climate Change Sectoral Roadmap (ICCSR)* in 2009; the establishment of National Council on Climate Change (DNPI) in 2008; the launch of Indonesia Climate Change Trust Fund in 2009; the preparation of *the Second National Communication (SNC)* to be submitted to UNFCCC by 2011; and creation of new sections/teams dealing with climate change related policies in a number of line ministries including Ministry of Forestry, Ministry of Energy and Mineral Resources, Ministry of Agriculture; and State Ministry of Environment. A number of policy actions included in the CCPL Policy Matrix dealt with these development.

In developing the new Policy Matrix (for 2010 and beyond), the GOI and the development partners agreed to put more priority on upstream policies, and categorize them as “Key Policy

Issues (Upstream Strategies)” to be placed on top of the Policy Matrix, instead of the former “Crosscutting issues.”

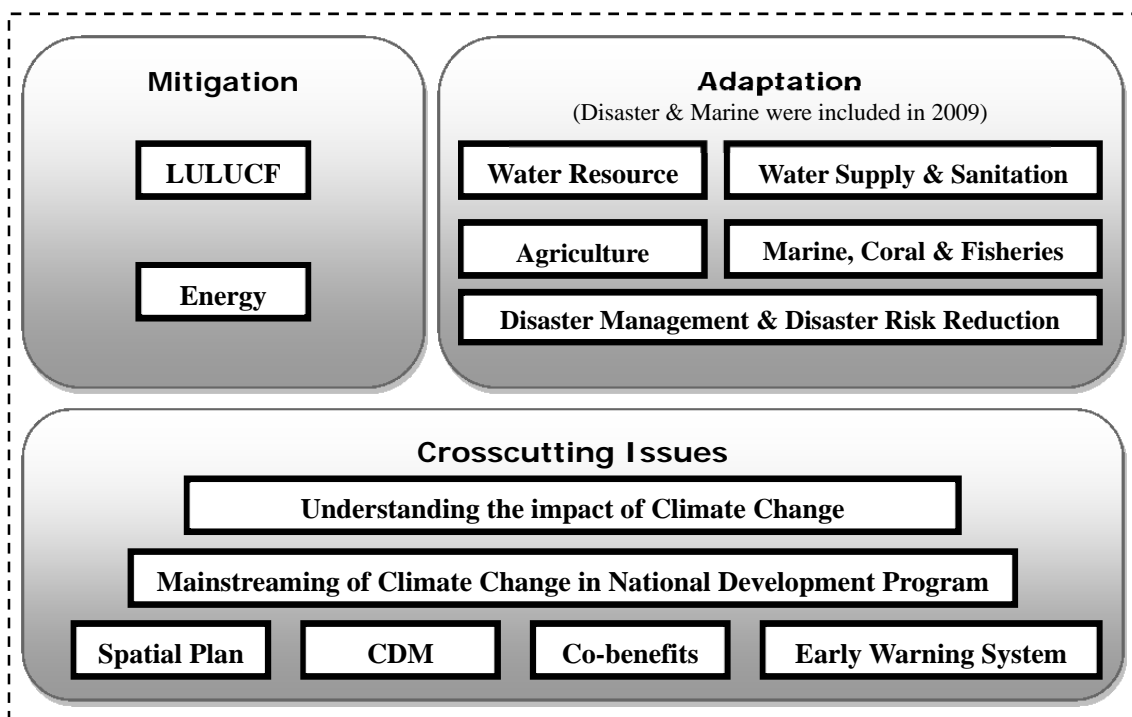


Figure 2 : The structure of CCPL Policy Matrix (2007-2009)

In the latter half of 2010, Japan International Cooperation Agency (JICA) started its activities of 1) monitoring/evaluation of the progress/attainments of 2010 Policy Matrix; and 2) preparation of 2011 Policy Matrix and beyond, in close cooperation with the GOI. Global Group 21 Japan co.ltd (GG21) and Institute for Global Environmental Strategies (IGES) was entrusted by JICA to support the above activities from November 2010 to July 2011, and conducted three times of study missions in Indonesia. On the basis of the result of these missions and subsequent follow-up activities, GG21 and IGES developed this report to describe the status of 2010 policy targets/actions, as well as the analysis of 2011 indicators in the following sectors.



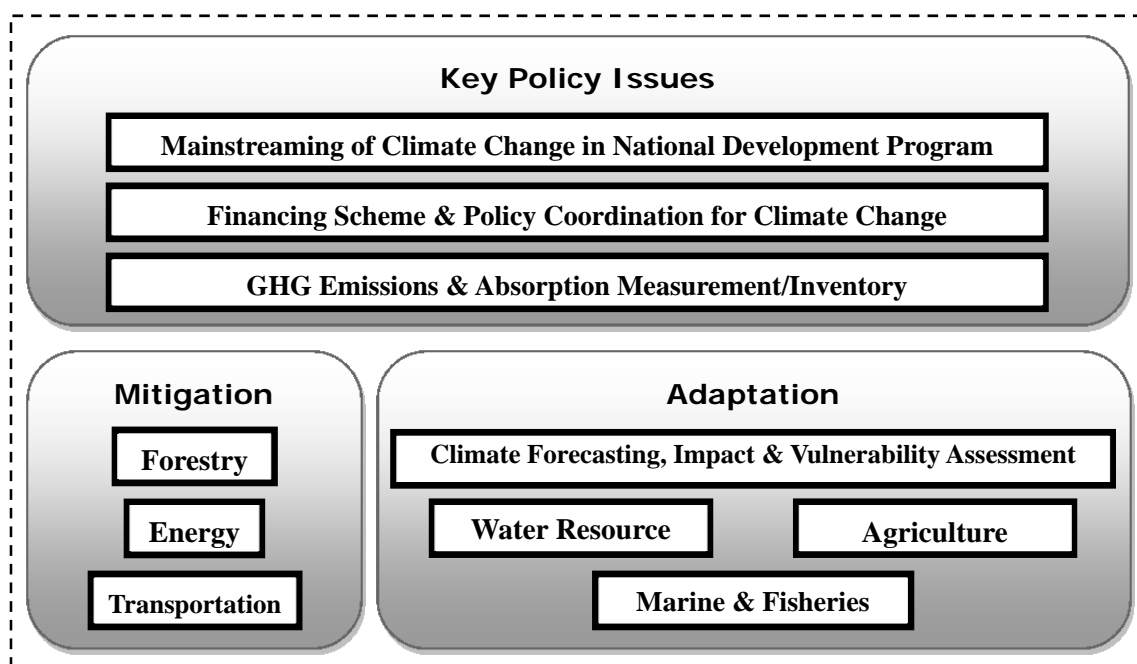


Figure 3 : The structure of CCPL Policy Matrix (2010-)

The status of 2010 policy targets/actions will be analysed in terms of their progress/attainments and obstacles/challenges. 2011 indicators are analysed in terms of their relevance and impacts to overall development of Indonesian climate change policies.

## Status of policy targets/actions

### 1. Key Policy Issues/Upstream Strategies

#### 1.1. Mainstreaming Climate Change in the National Development Program

Climate change issues have not been covered in Indonesian national development planning process until recently. Since 2007, the GOI started to mainstream climate change issues in its national development policies and has prepared: *National Development Planning: Indonesia Responses to Climate Change (2007)*, *Indonesia Climate Change Sectoral Roadmap*. At the same time, *the medium-term National Development Plan (RPJMN 2010-14)* also identified climate change as one of four issues to be dealt with cross-sectoral efforts<sup>2</sup>.

Policy actions for mainstreaming of climate change issues were covered by the previous phase of Indonesia Climate Change Program Loan (CCPL). For instance, the following policy targets/actions were included in the "Crosscutting" sector on the CCPL Policy Matrix in CY2008 and 2009: drafting *SNC* to be submitted to UNFCCC, integrating climate change issues

<sup>2</sup> BAPPENAS 2010 (*RPJMN 2010-14*), Book II, Chapter I. Other three issues are: poverty alleviation; development of small islands and coastal areas; and child protection.

and policies in *the 2009 Government's Action Plan (RKP)* and the *RPJMN 2010-14*, and preparatory study for fiscal incentive mechanism to facilitate renewable energy development. Most of above policy targets/actions showed good progress during the previous phase (2007-2009).

As mentioned earlier, the GOI and development partners agreed to re-categorize the policy targets/actions for mainstreaming as "Key Policy Issues" and to place them on the top of the new Policy Matrix starting from the policy matrix in 2010 and beyond.

The CY2010 CCPL Policy Matrix specified four actions toward further mainstreaming of climate change policies: finalization of *ICCSR*; legitimization by issuance of a presidential decree on *National Action Plan on Reduction of Greenhouse Gas Emissions (RAN-GRK)*; submission of voluntary mitigation action plan based on the Copenhagen accord to UNFCCC; and revision of *National Action Plan addressing Climate Change (RAN-PI*, Ministry of Environment (MOE), 2007).

Of these four actions, finalization of *ICCSR* and submission of voluntary mitigation action to UNFCCC were completed as scheduled. However, it was decided that *RAN-PI* would not be revised in 2010 for two reasons: mitigation policies have already been updated in *RAN-GRK*, and adaptation policies would be developed as National Adaptation Strategies by 2013. The presidential decree on *RAN-GRK* was issued on September 20, 2011.

Following the above progress/attainments, 2011 Policy Matrix set targets/actions aiming at: a) proceeding the GOI's development of national strategies in the forms of Nationally Appropriate Mitigation Actions (NAMA) and National Adaptation Strategies; and b) facilitating the local governments to prepare the action plans.

Status of 2010 Targets/Actions and 2011 Targets/Actions set for  
“1.1. Mainstreaming Climate Change in the National Development Program”

<b>2010 Targets/Actions</b>	<b>Status</b>
(1) Finalize <i>Indonesia Climate Change Sectoral Roadmap (ICCSR)</i> .	Attained
(2) Issue a presidential decree on <i>National Action Plan for 26% GHG voluntary reduction</i> .	Substantial Progress
(3) Submit mitigation actions and commitments under Copenhagen Accord to UNFCCC, based on commitments by the president, policy documents and policy dialogues.	Attained
(4) Revise <i>the National Action Plan Addressing Climate Change (2007)</i> .	Substantial Progress
<b>2011 Targets/Actions</b>	
(1) Use <i>Midterm Development Plan (RPJM)</i> and <i>RAN-GRK</i> as a basis to prepare the draft concept of Nationally Appropriate Mitigation Actions.	
(2) Issue a guideline for provincial action plans based on <i>RAN-GRK</i> .	
(3) Conduct a socialization for preparing the draft provincial action plans in 2 regions for contributing to 26% reduction based on the Presidential decree.	
(4) Prepare a concept note of national adaptation strategies.	

## 1.2. Financing Scheme and Policy Coordination for Climate Change

The climate change policies encompass many sectors and actors, involving both the central and the local governments. However, it is often observed that local governments tend to face constraints, financial, technical and human, in planning and implementing climate change policies. Thus, policy coordination on climate change among ministries and local governments is important. While technical and human resources constraints are being addressed in the outcome area 1.1 “Mainstreaming Climate Change in the National Development Program,” providing financing scheme constitutes a key for a successful implementation of climate change policies.

Bearing these concerns in mind, the CY2010 Policy Matrix included actions related to: 1) the Indonesia Climate Change Trust Fund (ICCTF), a funding mechanism to promote implementation of climate change policies; 2) conduct a study on Performance Based Budgeting (PBB) related to climate change policies and programs; 3) incentives concept for the local governments including DAK (Dana Alokasi Khusus; Special Allocation Fund); and 4) establishment of Local Disaster Management Agencies (BPBDs).

The first action on ICCTF was exceedingly achieved, with three projects selected to be supported. The last (on BPBD) action was attained as scheduled. The second and third actions progressed but they need further deliberations within the relevant ministries.

Following the above status, further actions to facilitate the funding mechanism on climate

change policies are set in the 2011 Policy Matrix: of four actions, two are related to ICCTF, one is on PBB, and one is on the incentives concept.

Status of 2010 Targets/Actions and 2011 Targets/Actions set for  
“1.2. Financing Scheme and Policy Coordination for Climate Change”

<b>2010 Targets/Actions</b>	<b>Status</b>
(1) Implement innovative funding mechanism for Climate Change through the Indonesia Climate Change Trust Fund (ICCTF).	Exceedingly Attained
(2) Conduct a study on the implementation possibility of Performance Based Budgeting (PBB) for programs and policies of line ministries related to Climate Change.	Substantial Progress
(3) Improve the existing design of Climate Change DAK (Special Allocation Fund) or special incentives concept for local governments.	Substantial Progress
(4) Continue the efforts to establish Local Disaster Management Agencies (BPBD) in all provinces.	Attained
<b>2011 Targets/Actions</b>	
(1) Complete an Investment Strategy and revise the current standard operation procedure (SOP) for ICCTF.	
(2) Prepare selection of the National Trustee of ICCTF through discussion between the National Development Planning Agency (BAPPENAS) and Ministry of Finance (MOF).	
(3) Implement PBB for policies, programs and activities of line ministries related to CC.	
(4) Prepare concept for providing incentives for climate change.	

### 1.3. GHG Emission & Absorption Measurement Inventory

Accurate estimation of GHG emissions is among the urgent issues for Indonesia toward its mitigation target. The Government of Indonesia has already aggregated data and estimated GHG emissions when it prepared *the First National Communication (FNC)* with support from Global Environment Facility (GEF) and United Nations Development Program (UNDP). Since 2007 the GOI worked on the revision and updating of data as a part of the preparation of *the Second National Communication (SNC)*. Main reports of the *SNC* have almost been finalized by 2009, apart from the LULUCF sector of which the estimation of GHG emissions which underwent a correction process.

Furthermore, GHG inventory requires periodical review and update, on account of the fluctuation of annual GHG emissions from LULUCF sector due to the global climate (such as *el-nino*), and the raising emissions from energy, transportation, and industry sectors owing to the rapid economic growth. The GOI works on establishing a national system to periodically review and update the GHG inventory.

Based upon the above development, two follow-up actions were included in the 2010 CCPL Policy Matrix: submission of the *SNC* to UNFCCC; and establishment of the National GHG

inventory system (SIGN). Both of them were attained as scheduled.

Following the above progress the GOI will further take steps toward development of GHG inventory through finalization of the Presidential Regulation on the National GHG Inventory System, as well as preparation of the technical guidance for waste sector.

Status of 2010 Targets/Actions and 2011 Targets/Actions set for  
“1.3. GHG Emission & Absorption Measurement Inventory”

<b>2010 Targets/Actions</b>	<b>Status</b>
(1) Submit main report of the Second National Communication to UNFCCC.	Attained
(2) Develop the GHG Inventory System (SIGN) through official process and design an Indonesian National MRV (Measurement, Reporting and Verification) System.	Attained
<b>2011 Targets/Actions</b>	
(1) Finalize draft Presidential Regulation on National GHG Inventory.	
(2) Develop Technical Guidance for waste sector inventory development as a pilot sector.	

## 2. Mitigation

### 2.1. Forestry

Current estimation of forest area covered by natural forests in Indonesia is 86 million ha (*Forestry Statistics of Indonesia, 2009*). Recent report reveals deforestation rate from 2000-2009 reached 1.5 million ha per year and 2 million ha in peatland forest during this period<sup>3</sup>. Deforestation, forest degradation (including land use, land use change) and peat fires are considered to be the major contributors (about 60%) to GHG emissions in Indonesia. Therefore forestry sector is the most important sector for Indonesia’s effort to pursue its national target of reducing GHG emissions by 26% (less than Business as Usual by 2020) while sustaining 7% annual growth.

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

Ministry of Forestry (MOFR), in charge of the activities for above purpose, sets its directions of policies in forestry sector in the *RENSTRA (Strategic Plan) 2010-2014* as follows: support of sustainable economic growth and welfare; improvement of environmental quality and sustainability; adaptation to climate change impact; and improvement of disaster management. The specific activity areas which MOFR anticipates as climate change mitigation are

<sup>3</sup> *Portrait of Indonesia Forest, 2000-2009*, Bogor: Forest Watch Indonesia, 2011.

improvement of the peatland management, rehabilitation of forest and land and prioritised watersheds, and decreasing deforestation rate.

The areas of activities covered in the past CCPL Policy Matrix were: afforestation; establishment and improvement of reduce emission from deforestation and forest degradation (REDD) institutions; establishment of forest management units; preparation of government regulation to manage watershed. Most were attained or substantially progressed. Those actions are mostly continued in the 2010 Policy matrix with inclusion of peatland management issue. Four outcome areas were covered: forest management and governance, peatland conservation, REDD, and afforestation and reforestation. Most of the planned nine policy actions in these four outcome areas were attained, and action on implementing and monitoring performance on timber legality exceeded its target. However, two actions on coordination to improve the legal framework of peatland, and to issue a ministerial decree regulating mechanisms and procedures of REDD still need follow-up.

Following the progress in 2010, three outcome areas continued to be covered in the 2011 Policy Matrix: 1) Forest Management and Governance to further strengthen local governments/ organizations' capacity; 2) Peatland Conservation toward better stakeholders coordination on the lowland issues; and 3) REDD, to be steadily implemented with the clearer instructions and strategies.

**2.1.1. Forest Management and Governance**

Status of 2010 Targets/Actions and 2011 Targets/Actions set for  
“2.1.1. Forest Management and Governance”

<b>2010 Targets/Actions</b>	<b>Status</b>
(1) 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).	Attained
(2) 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.	Attained
(3) Implement and monitor performance of GOI regulation on timber legality. Assess capacity for oversight, certification, and monitoring in national standards agency.	Exceedingly Attained
<b>2011 Targets/Actions</b>	
(1) Establish FMUs in 3 provinces.	
(2) Issue Ministerial Regulations for supporting the implementation of FMUs in provinces and districts.	
(3) Issue Technical Guidance for using Forestry DAK for FY 2012.	

### 2.1.2. Peatland Conservation

Status of 2010 Targets/Actions and 2011 Targets/Actions set for “2.1.2. Peatland Conservation”

2010 Targets/Actions	Status
(1) Coordinate among ministries to control peatland emissions implementation under the framework of presidential regulation.	Attained
(2) 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 peatland as major source of GHG emissions with target in 2010.	Substantial Progress
2011 Targets/Actions	
(1) Produce the Map of Peatland Hydrological Unit (Kesatuan Hidrologis Gambut) in Sumatra and Kalimantan.	
(2) Finalize a draft of Government Regulation on Swamp and conduct coordination among relevant ministries.	

### 2.1.3. REDD

Status of 2010 Targets/Actions and 2011 Targets/Actions set for “2.1.3. REDD”

2010 Targets/Actions	Status
(1) 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.	Substantial Progress
(2) Conduct/implement REDD demonstration activities (at least 3), specify results in specific locations and partners.	Attained
2011 Targets/Actions	
(1) Issue presidential instruction on Moratorium.	
(2) Finalize National Strategy of REDD+.	

### 2.1.4. Afforestation and Reforestation

Status of 2010 Targets/Actions and 2011 Targets/Actions set for  
“2.1.4. Afforestation and Reforestation”

2010 Targets/Actions	Status
(1) Rehabilitation of protected areas consisting replanting of 100 thousand ha and develop technical design for another 100 thousand ha.	Attained
(2) Issue a ministerial decree on forest land allocation for timber plantation (Industrial Forest Plantation: Hutan Tanaman Industri (HTI) and Community Forest Plantation: Hutan Tanaman Rakyat (HTR)).	Attained
2011 Targets/Actions	
No target/action set for CY2011	

## 2.2. Energy

Energy and industry sector is reported to generate about one fourth of GHG emission in Indonesia in 2005<sup>4</sup>. The sector is one of key and growing sectors of mitigation along with LULUCF. Considering the rapid and steady growth of GDP in Indonesia (projected to be as rapid as 6.6% per year during 2010-2014, and 7.2% per year during 2015-2030<sup>5</sup>) it is expected that GHG emissions from energy sector will continue to further increase without policy interventions.

In the previous phase of CCPL, four main areas were covered: 1) geothermal development, 2) all other renewable energy development, 3) improvement of energy efficiency and conservation, and 4) rural electrification through Energy Self-Sufficient Village Program (DME).

In geothermal development, in order to provide incentive to private power developers, the purchasing price of geothermal power was set at 9.7 cents/kWh.<sup>6</sup> The feasibility study (F/S) for an exploration fund that would mitigate commercial risk during the initial exploratory stage of geothermal power development was completed.

In other renewable energy development, the establishment of National Energy Council (DEN) was a prominent achievement. DEN's responsibilities include designing *the National Energy Policy (KEN)*, the national energy plan and the response to national energy crisis. DEN has prepared the blue print of the new directorate general for new and renewable energy.

As for improvement of energy efficiency and conservation, energy audit program covering total 240 building and industries, and introduction of energy-saving household appliances, e.g., CFL, were covered. Ministry of Industry (MOI) has started working on an industrial CO<sub>2</sub> reduction road map for the cement and steel sectors.

Energy Self-Sufficient Village Program (DME) aims to provide electricity generated by renewable energy to rural areas and to foster income generation and employment creation through economic activities induced by newly installed power supplies. In total, 633 villages were supplied electricity from 2007 to 2009.<sup>7</sup>

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4 SNC estimates that out of 1,791,371.89 Gg CO<sub>2</sub>e of total GHG emissions including Land Use Change and Forestry (LUCF) sector, 369,799.88Gg or about 20.7% was from Energy sector, while 48,733.38Gg, or about 2.7% was from Industrial process. (*Second National Communication*, Executive Summary, xi)

5 *Second National Communication*, Chapter V page 4.

6 MEMR Ministerial Regulation no, 32/2009 on Standard Purchase Price of Electricity Power by PLN from Geothermal Electricity Power Station

7 *Republic of Indonesia, Climate Change Program Loan (2007-2009), Program Evaluation Report*



The GOI plans to increase the share of renewable energy to 15% of total energy sources by 2025<sup>8</sup>. GHG emissions reduction in energy sector covers the areas of: renewable energy development; improvement of energy efficiency; adjustment of energy price (or energy subsidy); and promotion of clean energy technology.

CY2010 Policy Matrix has three pillars of policy actions: renewable energy development, energy efficiency, and electricity pricing. The policy actions for renewable energy development focus on the promotion of renewable energy sources, especially geothermal. The actions for energy efficiency address the issues from both the supply side and demand side. Electricity pricing, based on the GOI's subsidy policies, influences both of these issues, and deals with the GOI's effort to gradually shift to market-based pricing.

Renewable energy development was progressed by way of improvement of policy framework to promote geothermal power plant development; regulating the scheme of purchasing price of electricity from geothermal plants; signing power purchase agreements (PPAs) with independent power producers (IPPs); issuance of Ministry of Energy and Mineral Resources (MEMR) regulation on the incentives to develop renewable energy; and issuance of presidential decree assigning State Electricity Company (PLN) to conduct acceleration of power plant development using renewable energy. All of these targets were attained.

On energy efficiency, continuous efforts will be taken to decrease energy intensity by around 1% per year on average until 2025 through enhancing energy efficiency and conservation measures. The 2010 CCPL Policy Matrix set two actions as follows: study on the national framework of CO<sub>2</sub> emissions reduction, and development of energy conservation master plan. The first target was a preparatory process for technical guidance on reducing CO<sub>2</sub> emissions in cement industry, which MOI plans to issue as the ministerial decree. The study has progressed as planned, and the technical guidance will be finalized by 2011. Additionally, MOI put its Grand Strategy for Energy Conservation into practice from September 2010, including assessments of technical needs and training of energy managers for 50 enterprises in steel and pulp & paper industries. Though the Grand Strategy has not been specified as a target of CY2010 policy matrix, it should be highlighted as an important step. The second target aimed at revision of *the National Master Plan for Energy Conservation (RIKEN)* containing the targets, key policy programs, and specific conservation measures such as periodical energy audit, implementation and monitoring of energy management system, and introduction of energy efficiency standards and labelling system for appliances. *RIKEN* has been revised by 2010 as scheduled, and would be issued after launch of *KEN*.

On pricing issue, the policy action on the roadmap of improving energy subsidy policy was

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<sup>8</sup> Presidential Regulation No. 5/2006 on National Energy Policy.

attained. The roadmap was completed in January 2010. Since the roadmap contains several options, depending on the level of tariff changes, no revisions were needed after the tariff increase in 2010. After coordinating with the Diet, it was decided that the roadmap would not be made public. In 2011, MEMR will focus on reducing PLN's production cost to reduce the electricity subsidy.

Following the above developments, 2011 Policy Matrix takes further steps. For further promoting renewable energy development, the barriers of the geothermal power development are dealt with various institutional reforms including provision of revolving fund, selecting the fund manager and setting the financial mechanism. These institutions will reduce the upstream risk of geothermal development. At the same time, PLN is mandated to buy the electricity from the geothermal developers at a maximum \$9.7c/Kw. This will also provide assurance for the IPPs. MOF's new decree to replace 24/2010 and MEMR Regulation on Feed-in Tariff (FIT) for solar and wind as well as the blueprints on geothermal, hydro and solar power will lead to the promotion of renewable energy development.

At the same time, four actions are set to improve energy efficiency. The first stage of the Energy Conservation Grand Strategy will be completed by the middle of the year, and will contribute to GHG emissions reduction and energy conservation in pulp & paper industries and others. The Clean Coal Technology (CCT) roadmap implementation will improve the efficiency of coal thermal power plants, of which effect will be further enhanced by the REFF-BURN (Reducing Emission from Fossil Fuel Burning) framework. The technical guidelines for the cement industry will contribute to reducing emissions in the sector immediately after becoming enacted.

Last but not least, the evaluation of production cost and subsidies of electricity will provide the GOI with clearer picture on electricity subsidy level, and thus enable more cost-effective energy mix.

### 2.2.1. Renewable Energy Development

Status of 2010 Targets/Actions and 2011 Targets/Actions set for

“2.2.1. Renewable Energy Development”

2010 Targets/Actions	Status
(1) 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.	Attained
(2) Issue draft regulation to clarify the scheme of compensation for the incremental cost of geothermal electricity to off-taker.	Attained
(3) Demonstrate progress by signing PPAs (at least 1) of geothermal projects.	Attained
(4) Issue ministerial regulation (MOF) No. 21/2010 (PPH) and No.24/2010 (PPN DTP) on incentives for renewable energy development.	Attained
(5) Issue Presidential Decree No.4/2010 on assignment to PLN to conduct acceleration of power plant development using renewable energy, coal, and gas.	Attained
2011 Targets/Actions	
(1) Select fund manager for revolving fund and prepare SOP for the fund.	
(2) Prepare draft Ministerial Decrees on Fund Manager Assignment and Financial Mechanism (disbursement and funding management).	
(3) Issue a ministerial decree on PLN’s obligation to purchase geothermal power from projects of Crash Program II.	
(4) Issuance of Ministerial Regulation to replace Ministerial Regulation No. 24/2010 (PPN DTP).	
(5) Draft Ministerial Regulations on Feed-in Tariff (FIT) for solar and wind.	
(6) Draft Blueprint(s) on geothermal, hydro and solar.	

### 2.2.2. Energy Efficiency

Status of 2010 Targets/Actions and 2011 Targets/Actions set for “2.2.2. Energy Efficiency”

2010 Targets/Actions	Status
(1) Conduct a study on a national framework for emissions reductions in the cement sector.	Attained
(2) 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 Ministry of Industry (MOI).	Attained
2011 Targets/Actions	
(1) Complete the first phase of the Grand Strategy (F/S, on-line system).	
(2) Draft the Clean Coal Technology (CCT) roadmap for Indonesia.	
(3) Finalize Technical guidance as a ministerial decree regarding the cement industry.	
(4) Draft Framework of REFF-BURN (Reducing Emission from Fossil Fuel Burning) as integrated approach to mitigate emission from fossil fuel in energy sector.	

### 2.2.3. Pricing

Status of 2010 Targets/Actions and 2011 Targets/Actions set for “2.2.3. Pricing”

2010 Targets/Actions	Status
(1) Finalize a road map for improving subsidy policy of electricity.	Attained
2011 Targets/Actions	
(1) Evaluate production cost and subsidies of electricity.	

### 2.3. Transportation

The transportation sector accounted for almost 37% of the final energy consumption in Indonesia in 2009<sup>9</sup>. This is the second largest as compared to the industries. Particularly road transportation weighs 42% of domestic fuel consumption. CO<sub>2</sub> emissions from transportation sector have been steadily increasing, from about 40 million tons in 1995 to over 54 million tons in 2000 and to around 68 million tons in 2005<sup>10</sup>.

Rapid increase of energy consumption in transportation sector is ascribed mainly to the increase of personal vehicles, and growing movements of passengers and cargoes.

The GOI has three major strategies to reduce GHG emissions from transportation sector: to reduce volume of transportation; to shift means of mobility; and to improve the 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 strategies.

I In the CY2010 Policy Matrix, Modal Shifting (for “shifting measures of mobility”) and Traffic Management (for “avoiding/reducing volume of transportation”) were selected as the two outcome areas to be specified. The policy targets/actions for the former area were: development of Bus Rapid Transit; and improvement of pedestrian facilities and bicycle lanes. Both of them showed a substantial progress, though not “attained” the original target in 2010.

The action set to improve traffic management, namely establishment of area traffic controlling system (ATCS) in Bogor and Surakarta was attained.

In addition to these developments, the Ministry of Transportation (MOT), BAPPENAS, and the development partners were aware of the importance to cover fundamental strategies of transportation development in CCPL. Thus, CY2011 CCPL Policy Matrix it was agreed that Overall Transportation Policy was included as the new outcome area.

2011 Policy Matrix further focuses on the institutional development of transportation policies particularly in the growing urban areas through developing the master plan and authority to

<sup>9</sup> *Handbook of Energy and Economy Statistic 2010*, Ministry of Energy and Mineral Resources, 2011.

<sup>10</sup> Ibid.

manage the transportation in the metropolitan area, and regulating the traffic management and engineering systems.

### 2.3.0. Overall Transportation Policies

Status of 2010 Targets/Actions and 2011 Targets/Actions set for  
“2.3.0. Overall Transportation Policies”

2010 Targets/Actions	Status
No target/action was set for CY2010	-
2011 Targets/Actions	
(1) Formulate the revised Jabodetabek transportation master plan.	
(2) Draft Presidential Regulation for the Jabodetabek Transportation Authority.	

### 2.3.1. Modal Shifting

Status of 2010 Targets/Actions and 2011 Targets/Actions set for “2.3.1. Modal Shifting”

2010 Targets/Actions	Status
(1) Develop Bus Rapid Transit (BRT) in 2 cities: Tengerang, and Sarbagita Area (Denpasar, Badung, Gianyar, Tabanan) Bali.	Substantial Progress
(2) Improve pedestrian facilities in Bukit Tinggi and develop bicycle lane in Sragen.	Substantial Progress
2011 Targets/Actions	
No target/action is set for CY2011 (Focus will be on upstream policy issues in 2.3.0)	

### 2.3.2. Traffic Management

Status of 2010 Targets/Actions and 2011 Targets/Actions set for “2.3.2. Traffic Management”

2010 Targets/Actions	Status
(1) Develop Area Traffic Control System (ATCS) in Bogor and Surakarta.	Attained
2011 Targets/Actions	
(1) Issue Government Regulation of Traffic Management and Engineering, which consists of Electronic Road Pricing (ERP) arrangement <sup>11</sup> .	

## 3. Adaptation

### 3.1. Climate Forecasting and Vulnerability Assessment

Being an archipelagic country with large number of population living on fishery and agriculture, Indonesia is vulnerable to impacts of climate change. El Nino and La Nina phenomena and extreme meteorological conditions have caused serious damage.

<sup>11</sup> This Government Regulation was issued in 2011 as PP 32/2011.

Furthermore, “the increasingly high temperatures are exacerbating the extreme regional weather and climate anomalies associated with El Nino.”<sup>12</sup> In fact, increasing numbers of floods, landslides, forest fires, droughts, high-tides, diseases were observed in Indonesia. These incidents might cause large-scale loss in human lives and in production of agriculture, fishery, livestock and other industries.

Effective planning and implementation of adaptation program requires accurate forecast of climate change impacts on economy and society of the country and region.

In the past phase of CCPL, the development of the system of information-sharing and early-warning by the Agency of Meteorology, Climatology and Geophysics (BMKG) was covered. BMKG, renamed in 2008 from former BMG (the Meteorology and Geophysics Agency), expanded Early-Warning System for Tsunami after the Asian Tsunami in 2004, and has been further developing an Early-Warning System covering Tsunami, Climate and Meteorology.

*ICCSR* identifies forecast of climate change impact, vulnerability assessment and development of adaptation information system, as the highest priority issues during the initial six years (2010-2015) out of the long-term Roadmap till 2030.

In the 2010 policy actions, the following three actions were taken up and all of them were attained:

- 1) Start developing the climate modeling as the basis of the development of impact and vulnerability assessment;
- 2) Implement INAGOOS (Indonesian Global Ocean Observing System) to cope with climate change; and
- 3) Prepare the criteria of the impact of climate change.

Following the above progress, 2011 Policy Matrix included five actions aiming at further strengthening of observation, analysis and information sharing related to climate adaptation.

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<sup>12</sup> *Second National Communication*, Executive Summary p-xvi.

Status of 2010 Targets/Actions and 2011 Targets/Actions set for  
“3.1. Climate Forecasting and Vulnerability Assessment”

<b>2010 Targets/Actions</b>	<b>Status</b>
(1) Start developing the climate modelling as the basis of the development of impact and vulnerability assessment.	Attained
(2) Implement INAGOOS to cope with Climate Change.	Attained
(3) Prepare an academic paper for Government Regulation to the criteria of the impact of Climate Change.	Attained
<b>2011 Targets/Actions</b>	
(1) Complete 7 climate change modelling scenario.	
(2) Develop climate database including 5 parameters (rainfall, temperature, humidity, wind and sun light).	
(3) Continue vulnerability assessment studies: complete 1st phase in Bali (current and past vulnerability in food security and water availability), start one in West Nusa Tenggara.	
(4) Complete Strategic Plan (2011-2014) for INAGOOS.	
(5) Prepare List of Criteria of Standard of Environmental Degradation of Climate Change Impact.	

### 3.2. Water Resources

The GOI has been conducting assessment on climate impacts and risks in local areas. It is expected that possible climate change impacts to water resources in Indonesia are water scarcity, flood and drought. Several climate change studies have suggested that temperatures have increased consistently with significant decreases and/or increases in rainfall in many parts of Indonesia, with different, but significant, trends in different areas. In addition to the observed rise in sea level, a rise in sea level by varying degrees was also predicted in many coastal areas of Indonesia, leading to inundation and salt water intrusion in coastal cities. Due to this variability and change in the climate, various regions in Java and the eastern islands of Indonesia face water shortage every year. Also, wider areas are projected to have water scarcity in the future. *SNC* shows an expected scenario of water balance under certain assumptions<sup>13</sup>. According to the scenario, the districts with no water surplus throughout the year will increase significantly from approximately 14% of total 453 districts to 19% by 2025 and 31% by 2050. Water shortages would undoubtedly have a negative effect on various sectors including households, agriculture, forestry, energy, and industry.

From 2008 to 2010, the GOI has advanced policies and institutions related to water resource management. Firstly, the Government Regulation No.42/2008 on water resource management

<sup>13</sup> 1) Population increases as estimated by the Bureau of Statistics, 2) forest cover decreases at rate of 1% per year and deforestation occurs in all districts, 3) rice field area decreases at a rate of 50,000 ha per year in Java while increases at a rate of 150,000 ha per year outside Java, and 4) Human Development Index (in Indonesia) continues to improve. (*SNC*, IV-20)

was issued. The regulation contains four main topics of: 1) definition of water resource management; 2) policy and guidelines for water resource management; 3) provision of river areas, watersheds, water quality management, water utilization zones, water allocation, water resource facilities, and water resource development; and 4) role of the National Water Resource Council. Secondly, institutions and organizations for water resource management were also developed both at the national and local levels. National Water Resource Council and Provincial Water Resource Councils were established, and have begun undertaking the responsibility of preparing and implementing strategic development plans of the water resources and river basins under their jurisdictions. River basin centers (Balai Wilayah Sungai) and river basin offices (Balai Besar Wilayah Sungai), the agencies responsible for developing basin-level water resource management plans, were established covering 69 river basins in Indonesia. Balai Wilayah Sungai and Balai Besar Wilayah Sungai were strengthened through the recruitment of engineers and establishment of 'Dissemination Units'. Last but not least, Balai Wilayah Sungai and Balai Besar Wilayah Sungai worked on preparing Integrated Water Resource Management Patterns and Plans (POLA<sup>14</sup>). The above achievement would enable effective project development and implementation at river basins to reduce the risks of flood and water scarcity.

In 2010, the GOI further progressed toward strengthening the institutional capacity of river basin management. The target in the Policy Matrix was exceedingly attained by completing 18 Provincial Water Resource Councils, 21 Coordination Teams for Water Resources Management in River Basins (Tim Koordinasi Pengelolaan Sumber Daya Air: TKPSDA, teams designated for each river basin to discuss and design water resource management plans and patterns, program and activity plans, water allocation, hydrological information systems, and human and financial resources management), and 8 POLAs.

To further improve the management of water resources, 2011 Policy Matrix set the target of completing the draft of master plans for 2 river basins in Java island.

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14 What is called POLA in this report is the Integrated Water Resource Management Pattern and Plan (Pola Pengelolaan Sumber Daya Air). POLA is developed by Balai Wilayah Sungai or Balai Besar Wilayah Sungai as the basis for preparing policies and strategies for management of all river basins. Note, however, that Indonesian word "pola" is a general noun meaning "patterns."



Status of 2010 Targets/Actions and 2011 Targets/Actions set for “3.2. Water Resources”

2010 Targets/Actions	Status
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).	Exceedingly Attained
2011 Targets/Actions	
(1) Complete draft of master plans for 2 River Basins in Java Island (Cimanuk-Cisanggarung and Brantas River Basins) which include climate change adaptation measures.	

### 3.3. Agriculture

Expected changes in spatial rainfall patterns, the length of the wet season and inter-seasonal variability will have serious implications for agriculture sector. Studies suggested that the rice production in Java is likely to decrease by about 1.8 million tons from the current production level in 2025, and 3.6 million tons in 2050<sup>15</sup>. Incorporating the impact of rice field conversion to non-agriculture lands in Java, the production loss will increase to 5.2 million tons in 2025, and 13.0 million tons in 2050<sup>16</sup>.

In addition, the change in temperature and rainfall may increase crop diseases. Studies suggest that sea level rise has impact on production in rice and corn.

In the first phase of CCPL, the GOI has advanced policies and institutions related to agriculture, which included implementing and increasing the scale of the Climate Field School (CFS) programs and the System for Rice Intensification (SRI) at the local level; developing irrigation asset management system; creating (Semi)<sup>17</sup> Dynamic Cropping Calendar Maps. The CFS and SRI programs directly influence farming activities, forging a link between climate policies and farmers’ livelihood. Ministry of Agriculture (MOA) conducted 145 units of CFS in 2007, 155 units in 2008 and 180 units in 2009. However, one of the major challenges is that the CFS and SRI program remains very limited in scale compared with the total areas of paddy and total number of farmers and thus further scaling-up efforts are needed.

15 Boer, R. A. Buono., A. Rakhman, and A. Turyanti. 2009 Historical and Future Change of Indonesian Climate. In *MOE Technical Repoar on Vulnerability and Adaptation Assessment to Climate Change for Indonesia’s Second national Communication*. Jakarta : MOE and UNDP.

16 *Second National Communication*.

17 “Semi” means that the current cropping calendar maps are prepared only in hard copies. In future, the same maps are expected to become on-line (=fully dynamic) cropping calendar map.

In 2010, the GOI made a substantial progress for the action in the policy matrix with regard to implementation of Climate Field Schools, System for Rice Intensification, and to land development and management without burning. Evaluation of these activities, however, has not taken place.

To further promote the implementation of on-the-ground activities to stabilize agricultural production, two actions are set in the 2011 Policy Matrix: issuance of presidential production, and drafting of technical guidance of CFS and SRI.

Status of 2010 Targets/Actions and 2011 Targets/Actions set for “3.3. Agriculture”

2010 Targets/Actions	Status
Evaluate performance, then improve and scale up actions for adaptation in agriculture including Climate Field Schools (CFS), 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).	Substantial Progress
2011 Targets/Actions	
(1) Issue a Presidential Instruction on security measures for rice production in facing extreme climate.	
(2) Prepare a draft of Technical Guidance related to Climate Field School (CFS) and System of Rice Intensification (SRI) based on the Presidential Instruction.	

### 3.4. Marine and Fisheries

Indonesia consists of 17 thousand islands, and is vulnerable to the impacts of climate change. Potential threats to the coastal areas and small islands in Indonesia include:

- Sea level rise/inundation: the average of sea level rise in Indonesia is estimated to be 0.6cm per year, reaching 25cm by 2050, and 50cm by 2100. This figure means that about 25% to 50% of urban areas in the largest cities of the country, such as Semarang, Surabaya, Jakarta, and Medan will inundate. At the same time, outer islands of Indonesia could also be affected. 50cm of rise of sea level, if happened in combination with tidal pattern change, would lead to inundation of five islands<sup>18</sup>.
- Warmer sea surface temperature: the average of sea surface temperature trend over the Indonesian sea is projected to increase 0.65C ( $\pm 0.05C$ ) in 2030. Warmer temperature seriously damages the coral reef in Indonesia, the largest in the world. Coral bleaching is a significant threat on fish by: damaging the habitats of thousands of species; and increasing the risk of coastal erosion.

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18 SNC, Chapter IV, p44.

- Increased frequency of extreme events: the frequency of extreme events, such as El Nino and La Nina is also projected to increase. As a consequence, more storms, cyclones, and higher waves hit the coastal areas.

Indonesia, having most of the largest cities and 50 to 60% of the total population in its coastal areas, would be heavily damaged by the above threats. For instance, higher risk of extreme events threatens human lives as well as houses and other infrastructure in the coastal communities. Damages in coral reef and fish population directly affect the economy by decreasing the fish and aquaculture productions.

The Government of Indonesia has tried to strengthen the coastal and island communities. The Coral Reef Rehabilitation and Management Program (COREMAP), for instance, was launched in 1998 with the objectives of conservation, rehabilitation and sustainable use of marine/coral resources as well as improvement of community welfare. Wide range of activities in the program contributes to making the coastal society and economy more resilient: community based income generation and management; rehabilitation of mangrove and coral; and setting of marine protection areas, just to name a few.

As described above, the COREMAP program has contributed to building resilience of coastal areas and fishery sector, mainly through the implementation of projects in support of fishermen and their communities. More specifically, resources have been allocated for improving land utilization, maintenance and control, evaluation, rehabilitation, development, and conservation of coastal environment. CY2010 CCPL Policy Matrix further focused on the ground-level activities to strengthen coastal communities, and set a target for developing a strategy for coastal community resilience. At the same time, CY2010 CCPL Policy Matrix also specified the target of conducting studies on coastal vulnerability and CO<sub>2</sub> flux to further address the research activities on coastal vulnerability and marine carbon cycle. Both were attained as planned.

To follow up the progress, three actions are set in the 2011 Policy Matrix: two are related to improve the resilience of coastal areas and communities, and the other aims at better understanding of the carbon flux of the ocean.

Status of 2010 Targets/Actions and 2011 Targets/Actions set for “3.4. Marine and Fisheries”

2010 Targets/Actions	Status
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 of Java, implementing study on coastal vulnerability in relation to sea level rise in Java and Bali, research on the variability of CO <sub>2</sub> flux in Banten Bay.	Attained
2011 Targets/Actions	
(1) Develop climate resilient village plan for 5 years, including detail engineering, implement the design and develop the community resilience through workshop and training in Tanjung Pasir.	
(2) Prepare draft/concept Strategic Plan on Coastal Vulnerability Recommendation for Marine and Coastal Resources in Indonesia.	
(3) Review and update Strategic Plan for Blue Carbon Research in Indonesia 2011-2014.	

## Conclusion

Started in 2008, the CCPL process has entered into the 4th year. Many of CCPL policy actions have been achieved and the GOI has made notable progress in terms of planning, creation of regulatory system, development of institutions, including data collection system and funding mechanism for climate change programs and projects. *RAN-GRK* and its associated programs and their monitoring in the CCPL framework the GOI will be an endeavour that deserves international attention in the context of climate change negotiations in the UNFCCC on measurable, reportable and verifiable NAMA. CCPL-related technical assistance and studies extended by Japan and AFD<sup>19</sup> are contributing to the GOI’s capacity development for designing climate change policies and their implementation.

## Overall recommendations<sup>20</sup>

- (a) Formulation of national-level climate change policies and implementation of them at local level needs close coordination with different stakeholders, i.e. provincial and regency governments and local population. Thus, further efforts for large scale consensus building are indispensable. Specifically, it is recommended to create a forum among stakeholders for information-sharing and coordination on climate change activities at provincial level.

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<sup>19</sup> JICA supports capacity development of Indonesian National and Local officers in the areas of: (a) NAMA preparation; (b) Vulnerability Assessment; and (c) GHG inventory system. JICA has also funded studies on risk mitigation for promoting private investment in geothermal development and for energy conservation.

AFD provides financial support for a study to enhance energy efficiency of energy intensive industries, e.g. cement.

<sup>20</sup> For the recommendations related to each sector, see the end of each section in the main report.

- (b) Proactive involvement of different stakeholders in planning and implementation of climate change policies should be further facilitated. To this end, providing incentives particularly to local governments would be effective. BAPPENAS and MOF are recommended to organize a committee to examine the incentives to local governments addressing climate change issues.
- (c) Further enhancing synergy-effect among the GOI and development partners for planning and implementation of climate change related programs will be important<sup>21</sup>. It is recommended that the CCPL Steering Committee Meeting be held back-to-back with the Climate Change Policy Coordination Forum organized by BAPPENAS.

The monitoring support team sincerely hopes that the CCPL process will make further contribution for Indonesia to continue achieving growth to become a low carbon and climate-resilient society.

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<sup>21</sup> The reporting of the results of 7th CCPL Steering Committee to the Climate Change Policy Coordination Forum organized by BAPPENAS inviting other donors, is a good first step toward this direction.