

**REPUBLIC OF INDONESIA
CLIMATE CHANGE PROGRAM LOAN (II)
ADVISORY AND MONITORING**

**FINAL REPORT
(SUMMARY)**

AUGUST 2010

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

Abbreviation List

A&M	Advisory and Monitoring
ADB	Asian Development Bank
AFD	Agence Française de Développement
AMFR	Agency for Marine and Fisheries Research
AusAID	The Australian Agency for International Development
Bappenas	The National Development Planning Agency, Republic of Indonesia
BAU	Business as Usual
BMKG	The Agency of Meteorology, Climatology and Geophysics, Republic of Indonesia
BNPB	The National Disaster Management Agency, Republic of Indonesia
BORDA	Bremen Overseas Research and Development Association
BPBD	Local Disaster Management Agency, Republic of Indonesia
CCPL	Climate Change Program Loan
CFL	Compact Fluorescent Lamp
CH ₄	Methane
CO ₂	Carbon Dioxide
COREMAP	Coral Reef Rehabilitation and Management Program
CTI-CFF	Coral Triangle Initiatives on Coral reef fisheries and food security
CY	Calendar Year
DAK	Special Allocation Fund
DEN	National Energy Council
DFID	Department for International Development (UK)
DG	Directorate General
DGEEU	Directorate General of Electricity and Energy Utilization
DGFC	Directorate General of Food and Crops
DGHS	Directorate General of Human Settlements
DGWR	Directorate General of Water Resources
DME	Energy Self-sufficient Village Program
DURMT	Dissemination Unit of Water Resource Management and Technology
FAO	Food and Agriculture Organization of the United Nations
FCPF	Forest Carbon Partnership 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
ICCPL	Indonesia Climate Change Program Loan
IGES	Institute for Global Environmental Strategies
IKK	Water Supply System Project in capitals of sub-districts (Kecamatans)
JBIC	Japan Bank for International Cooperation
JICA	Japan International Cooperation Agency
KfW	German Development Bank (Kreditanstalt für Wiederaufbau)
KLH	State Ministry of Environment, Republic of Indonesia
LEPLI	Economic and Agricultural Institution on Irrigation Land (tentative English translation of Lembaga Ekonomi Pertanian Lahan Irigasi)
LULUCF	Land Use, Land-use Change, and Forestry
MEMR	Ministry of Energy and Mineral Resources
METI	Ministry of Economy, Trade and Industry
MMAF	Ministry of Marine Affairs and Fisheries
MOA	Ministry of Agriculture
MOF	Ministry of Finance
MOFR	Ministry of Forestry
MOI	Ministry of Industry
NC-CDM	The National Commission on the Clean Development Mechanism
NSCTI	National Secretariat for Coral Triangle Initiative
NWRC	National Water Resource Council
P3A	Farmer Water User Association
PAMSIMAS	Water Supply and Sanitation for Low Income Communities
PT PLN	State Electricity Company
POLA	Integrated Water Resources Management Patterns and Plans
PU	Ministry of Public Works, Republic of Indonesia
REDD	Reducing Emissions from Deforestation and Degradation
REDDI	Reducing Emissions from Deforestation and Degradation in Indonesia
RUEN	National Energy Plan
SANIMAS	Community based sanitation facilities
SCs/SC	Steering Committee Meetings
SNC	The Second National Communication to the United Nations Framework Convention on Climate Change
SRI	System of Rice Intensification
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollar

Foreword

The Indonesia Climate Change Program Loan

In January 2008, the Government of Japan (GOJ) announced the 'Financial Mechanism for Cool Earth Partnership', which is designed to provide assistance on the basis of bilateral policy consultations to developing countries that aim to achieve emission reductions and economic growth and to contribute to climate stability. The Indonesia Climate Change Program Loan (ICCPL), which is the first large-scale programme loan (three tranches over three years) under the above financial mechanism, was decided upon between the Government of Indonesia (GOI) and the GOJ in August 2008. Based on this agreement, the former Japan Bank for International Cooperation (JBIC), which has now been merged into Japan International Cooperation Agency (JICA), disbursed USD 300 million to the GOI in September 2008. The Government of France (GOF), through AFD (Agence Française de Développement), also provided USD 200 million in co-financing in CY2008.

The ICCPL fund is designed to assist the GOI in overcoming budgetary constraints and has been integrated into the GOI general budget (treasury fund).

In order to facilitate the implementation of institutional and policy reforms and pilot projects related to climate change issues, a set of policy targets/actions was prepared by the GOI, based on *the Yellow Book*, and was summarized in the form of a *Policy Matrix*. The matrix originally covered six sectors: The 1) land use, land-use change, and forestry (LULUCF) and 2) energy sectors for Mitigation measures and the 3) water resource, 4) water supply and sanitation and 5) agriculture sectors for Adaptation measures; other policy actions for institutional and organizational strengthening, spatial planning, and so on were included in the 6) crosscutting sector.

The progress/attainments of the policy targets/actions stated in the Policy Matrix were monitored by the Advisory and Monitoring team (A&M team) and were reported on at the Steering Committee Meetings (SCs). SCs are periodically convened by the National Development Planning Agency (Bappenas) for delegates from the GOI, GOJ/JICA and the GOF/AFD to confirm the progress/attainments of policy targets/actions and to discuss possible remedial measures and/or additional actions to be taken.

A revised version of the Policy Matrix for CY2009 was discussed at the 3rd SC in May 2009 and it was agreed upon to include two additional sectors for monitoring, namely, (i) Disaster Management and (ii) Marine, Coral and Fisheries. The GOJ and the GOF agreed both to this revision and to providing the second tranche of the ICCPL.

The second tranche of the ICCPL (USD 400 million from JICA and USD 300 million from AFD) was disbursed in 2009. The USD 400 million was the first ODA loan under the framework of the Hatoyama Initiative to support, through financial and technical cooperation, the policies of developing countries that addressed Climate Change issues.

The Advisory and Monitoring activities for the second year of the ICCPL

The Institute for Global Environmental Strategies (IGES), together with Global Group 21 Japan, Inc. (GG21) formed the new A&M team under a contract with JICA. This team was formed to monitor the progress/attainments of CY2009 policy targets/actions, provide policy recommendations, evaluate the contribution that ICCPL made to Indonesia, and prepare institutional design for future cooperation to support GOI's efforts to address climate change beyond CY2010. The Final Report was prepared by the new A&M team to report on the progress of monitoring activities and to make advisory comments based on the information obtained at February and June 2010 visit. This document is the summary of the Final Report.

Overall

The Policy Matrix of the Climate Change Programme Loan to the Republic of Indonesia originally covered six sectors: The 1) land use, land-use change, and forestry (LULUCF) and 2) energy sectors for Mitigation measures and the 3) water resource, 4) water supply and sanitation and 5) agriculture sectors for Adaptation measures; other policy actions for institutional and organizational strengthening, spatial planning, and so on were included in the 6) crosscutting sector.

Based on the monitoring results of the CY2008 policy targets/actions, the GOI prepared a revised version of the Policy Matrix for CY2009. This revised version included comprehensive reviews of future institutional designs, remedial measures for delayed policy actions and two additional sectors to be monitored, namely, (i) Disaster Management and Disaster Risk and (ii) Marine, Coral and Fisheries.

The CY2009 Policy Matrix includes fifty four actions in total over eight sectors. The attainments of the CY2009 Policy Matrix are summarized in Table 1.

Table 1. Number of attained actions in the CY2009 Policy Matrix

	LULUCF	Energy	Water Resource	Water Supply	Agriculture	Disaster	Marine	Cross	Total	% Cumulative
◎	0	0	2	0	2	0	0	1	5	9
○	6	5	2	3	2	5	5	8	36	83
△	3	6	0	2	1	0	0	1	13	100
×	0	0	0	0	0	0	0	0	0	-
									54	-

◎:Exceedingly attained ○:Attained △:Substantial Progress ×:Unfulfilled

Land use, land use change and forestry (LULUCF) sector

Background

The forestry sector accounts for the largest share (about 72%) of Indonesian GHG emissions, mostly due to CO₂ emissions from deforestation (SNC 2009)¹.

Indonesia's total forested area is estimated to be 137.09 million ha² (MOFR 2008)³, covering approximately 70% of the country. Indonesia has the world's third largest area of tropical forest and the most species-rich forests in Asia. Forestry has contributed 3–4% to Indonesia's GDP over the past 10 years and about 120 million people are defined as forest-dependent. However, Indonesia's forest resources are not contributing as they should to poverty reduction, economic and social development, and environmental sustainability. Forest areas are threatened with degradation, fragmentation, and destruction; a quarter of the state forest area has no tree cover. Indonesia continues to experience a high, though declining, annual rate of forest loss.

Indonesia's forests hold about 5,897 million tonnes of carbon in their biomass (FAO 2009)⁴ and account for 80% of the carbon stock in soils and vegetation in the country (DFID/World Bank 2007)⁵. The sustainable management of these forests is critical to global climate change mitigation.

Attainments of the CY2009 Policy Matrix

The CY2009 Policy Matrix sets targets and actions for the forestry sector in view of the following outcomes: (i) Carbon absorption capacity is increased through the reforestation activities of 2007–2009; (ii) deforestation and degradation is reduced through the scheme of REDDI; and (iii) forest management is improved. Nine actions/targets were listed in CY2009 in order to achieve these outcomes. The results of CY2009 actions' attainments in the LULUCF sector are summarized in Figure 1.

1 The Republic of Indonesia 2009. Summary for Policy Makers: Indonesia Second National Communication under the United Nations Framework Convention on Climate Change (UNFCCC).

2 This figure includes marine conservation reserves. The terrestrial forest area is 133.7 million ha.

3 MOFR 2008. Forestry Statistics of Indonesia 2007.

4 FAO 2009. State of the World's Forests 2009.

5 DFID/World Bank 2007. Indonesia and Climate change: Executive Summary. Working paper on current status and policies.

LULUCF Sector

<CY2009> 3 outcomes, 9 actions ◎:0 ○:6 △:3 ×:0		
Outcome	Indication of CY2009 Actions	Category
-Carbon absorption capacity is increased through the reforestation activities of 2007-2009 -Carbon dioxide absorbed of 2007 (CO₂/year) = 58.6 million ton (*) -Carbon dioxide absorbed of 2008 (CO₂/year) = 70.2 million ton (*)	Maintenance of previous planting from Gerhan Program of 2007-2008	○
	Review mechanism and impacts of Gerhan program (2003-2009) and DAK Bidang Kehutanan to strengthen national forest rehabilitation policy for 2010-2014	○
	Implement the master plan on peatland: 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	△
Deforestation and degradation is reduced through the scheme of REDDI	Conduct REDDI pilot projects	○
	Issue Ministerial Decree on Mechanism and Procedures of REDD under UNFCCC Framework	○
	Prepare and submit Readiness Plan (R-Plan) to FCPF (Forest Carbon Partnership Facility)	○
Forest management is improved	Establish a Model Forest Management Unit in all provinces	△
	Issue Standard Operation Procedures (SOPs) and equipment standards of the Forest Fire Prevention Guideline	△
	Socialize the Forest Fire Prevention Guideline at provincial and district levels	△
	Issue a Government Regulation on Integrated Watershed Management	○

◎:Exceedingly attained ○:Attained △:Substantial Progress ×:Unfulfilled

Figure 1. CY2009 Actions' Attainments in the LULUCF Sector

- There appears to have been some difficulty in achieving the maintenance targets for Gerhan, which may be related to the fact that the funding provided for maintenance by the Central Government is relatively low and may not be sufficient to motivate some district governments. However, on P-1 (Maintenance-1: weeding, fertilizing, pest control, and replanting—300,270 ha planned) 270,250 ha were finished. On P-2 maintenance, 165,256 ha out of the 177,465 ha planned were achieved.
- Good progress has been made in conducting a review of Gerhan, with two major commissioned studies and four field surveys completed. The results have been shared at two events with MOFR officials.
- Although the spatial plan for Central Kalimantan is yet to be finalized, this has not stopped the provincial government from undertaking a range of initiatives to rehabilitate the former ex-Mega Rice Project area, including banning fires for land preparation.
- 27 REDDI pilot projects are being designed or implemented.
- The Ministry of Forestry has issued a Ministerial Decree on Mechanism and Procedures of REDD under UNFCCC Framework.
- Indonesia's Readiness-Plan, which sets out its REDD strategy, has been approved by the FCPF.

- The establishment of KPH models is progressing well with the support of the Acceleration Team created in 2009. A decree on KPH management institutions as well as norms, standards, and procedures for forest management now needs to be issued. Training programmes for KPH technical officers are required and ways of securing finances for KPHs in their first years of operation need to be examined.
- The Directorate of Forest Fire Control has taken the initiative to draft a Presidential Instruction that will ensure the synergy of all the relevant ministries and agencies in combating fire.
- The Ministry of Forestry and Public Works has agreed on a Government Regulation on Integrated Watershed Management, which will shortly be signed by the President.

Energy sector

Background

Indonesia is one of the fastest growing archipelagos among the ASEAN economies, with around 1.2% growth in annual population and 5% in annual GDP, coupled with 7% growth in annual energy demand. The energy sector plays a vital role in fuelling Indonesia's development. The energy sector (which includes the industry sector) accounts for about one-fourth of the country's total GHG emissions and is still rapidly growing. Fossil fuel combustion accounts for around 98% and non-fossil-fuels account for the remaining 2% of the total emissions of the energy sector.

Attainments of the CY2009 Policy Matrix

The CY2009 Policy Matrix includes 11 specific actions in the energy sector. Some of the actions for CY2009 have already been achieved while others need further progress before the target can be attained. The results of CY2009 actions' attainments in the Energy sector are summarized in Figure 2.

Energy

<CY2009> 4 outcomes, 11 actions ◎: 0 ○: 5 △: 6 ×: 0		
Outcome	Indication of CY2009 Actions	Category
Geothermal -by 2009: Institutional development for promotion of geothermal energy -by 2025: Installed capacity 9500MW	Design a FIT scheme for IPP-based Geothermal	○
	Design an exploration fund scheme	○
Renewable Energy -by 2009: Institutional development for promotion of renewable energy -by 2025: RE increased to 10% of total energy supply -In 2026: CO2 17% less than BAU scenario	Finalize the draft of President Reg. on Guideline of Formulation of National Energy Plan (RUEN)	△
	Finalize the draft of Govt. Reg. on "New and Renewable Energy development" & "Energy Demand and Supply"	△
Industry, Domestic(household) and commercial -short-term: Reduce energy intensity 1% / year -by 2025: Energy elasticity decreased to less than 1 -by 2025: Energy intensity is reduced to 2-18%	Issue a Govt. Reg. on "Energy Conservation"	○
	Design mid-term energy audit & efficiency program	△
	Conduct energy audit for 40 firms	○
	Issue Min. Reg. for energy efficiency labeling	△
	Issue Min. Reg. on CO2 Roadmap	△
	Design CO2 Roadmap implementation program	△
Access to energy in rural villages is enhanced by renewable energy.	Implement energy Self-Sufficient Village Program	○

◎:Exceedingly attained ○:Attained △:Substantial Progress ×:Unfulfilled

Figure 2. CY2009 Actions' Attainments in the Energy Sector

- Ministerial Regulation No. 32 Year 2009 on the Purchase Standard Price of Electricity Power by PT PLN (Persero) from Geothermal Electricity Power Station was issued on 4 December, 2009.
- Bappenas and KfW have initiated a Risk Mitigation Study that includes a geothermal exploration fund scheme. Bappenas and KfW have completed Part A (geotechnical) of this study, which includes an exploration fund scheme that targets all greenfield projects in Indonesia. Part B (risk management structure) was finalized in February 2010, and Part C (Procedure) in March 2010.
- The Presidential Regulation on Guideline for formulating RUEN, drafted in October 2009, is under a revision process with stakeholders both within and outside DEN; this is expected to be finalized soon.
- The first round (MEMR internal review process) of the draft governmental regulations on 'energy tariff and incentive policy of new-renewable energy' and 'demand and supply' has been completed. Because circumstances have been changed by the establishment of the Directorate General for New and Renewable Energy under MEMR, the content and placement of these regulations are likely to change.
- Ministerial Regulation No. 70 Year 2009 on Energy Conservation was issued on 16 December, 2009.

- The JICA Study on the mid-term energy audit and efficiency program has been started and is scheduled to have been completed by June 2010.
- An energy audit for 40 firms was carried out for CY2009.
- Technical guidance for CFLs was revised and submitted for internal review to be issued as a Ministerial Regulation. Technical guidance for TVs and for Refrigerators is under a revision process.
- The drafted ministerial regulation for a CO₂ roadmap for the cement sector is expected to be finalized by July 2010; this is expected to reflect the results of studies by METI Japan and AFD. The MOI aims to draft a ministerial regulation and a CO₂ roadmap for the steel sector by the end of 2010.
- A study by METI Japan to improve the CO₂ roadmaps for both the steel and cement sectors was completed by March 2010 after a series of site visits and an analysis of technology options. AFD has completed the first stage of the study to improve the CO₂ roadmap for the cement sector; the second stage of this study (six months) was launched in February 2010 along with the drafting of the regulation.
- The DME Program was implemented in 208 villages for CY2009 by various line ministries.

Water Resource Management sector

Background

Several climate change studies have suggested that the maximum and minimum 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, the water balance in most of Java and the eastern islands of Indonesia is now in deficit for most of the year. Also, more districts are projected to have water scarcity problems in the future.

Attainments of the CY2009 Policy Matrix

The CY2009 Policy Matrix sets out four specific actions related to legal and institutional reforms in the water resources management sector. The anticipated outcome of these policy actions is to improve water resource management in an integrated manner to strengthen resilience to increasing drought and flood risks, specifically in nationally strategic river basins on Java Island. The results of CY2009 actions' attainments in the Water Resource Management sector are summarized in Figure 3.

Water Resource Management		
<CY2009> 1 outcome, 4 actions		
◎: 1 ○: 3 △: 0 ×: 0		
Outcome	Indication of CY2009 Actions	Category
Improving water resource management in integrated manner to strengthen the resilience to the increasing drought and flood risks, specifically in nationally strategic river basins in Java island Mainstream DM/DRR in mid-term development Improve Disaster Management Planning	Establish a coordinated entity on water resource management (National Water Resources Council)	◎
	Issue a Presidential Decree for council members nomination to operationalise National Water Resource Council	○
	Finalize integrated water resource management plans (POLA) in National strategic river basin in Java under the coordination of related river basis water resources council	○
	Strengthen river basin management offices, Balai and Balai Besar	○

◎:Exceedingly attained ○:Attained △:Substantial Progress ×:Unfulfilled

Figure 3. CY2009 Actions' Attainments in the Water Resource Management Sector

- The National Water Resources Council (NWRC) was established by and started functioning as stipulated in Law No. 7 2004. The first plenary meeting of the NWRC was held in July 2009; the second plenary meeting, at which the national water resource policy was discussed, was held on 14 April, 2010. The NWRC has already finished certain important tasks such as the formation of three special ad-hoc committees, the finalization of the draft of national water resource policy and the proposal of groundwater zoning.
- Presidential Decree (No. 6/2009) on council members' nominations to operation NWRC was issued.
- The preparation and finalization of Integrated Water Resources Management Plans (POLA) in four national strategic river basins on Java Island continues with substantial progress having been made. Among the four POLA, one has been finalized for ministerial decree, two have been presented to the Governor, and one is under review by a special committee. Of the target of 69 POLA, with one in each national river basin, 58 POLA have been prepared and 3 have been finalized at the national level.
- The strengthening of river basin management offices (Balai and Balai Besars) is a continuing process in which notable progress has been made. One hundred and twenty-one young engineers were recruited by December 2009 and were dispatched to Balai and Balai Besars in April 2010, after having finished their internship in the seven directorates of the PU. Moreover, some of the staff of the Balai and Balai Besars has been trained as a result of JICA support. The 'Dissemination Unit of Water Resource Management and Technology (DURMT)' is already in operation and has begun to provide training to the staff from all the Balai and Balai Besars.

Water Supply and Sanitation sector

Background

The waste sector, including solid and liquid waste generates about 11% of overall GHG emission in Indonesia according to the SNC report in 2009. Of this, 97% is CH₄ emission, comprising industrial wastewater treatment and discharge (84%), domestic wastewater treatment and discharge (7%), and unmanaged solid waste disposal (8%). Obviously, it is imperative to improve the wastewater quality from industries through implementing regulations and introducing appropriate treatment technologies and incentives, but it is not covered in this sector of the ICCPL Policy Matrix. The ones covered in this sector are the domestic wastewater and solid waste, which require intensive focus in mitigating the impacts as the emissions from these sectors are projected to increase steadily in association of the economic and population growth under a BAU scenario.

In addition to the GHG emissions, water supply and sanitation sector, including wastewater, drainage and solid waste management, also has a strong linkage with adaptation. Firstly, the quality of these services affects human health in the ways in which infectious diseases can be communicated. In fact, the number of water- or vector-borne diseases is increasing year-by-year. Secondly, these services are also essential to minimizing the damage caused by floods, which has actually affected about 2 million people in the last 15 years and has resulted in USD 1.6 billion in economic loss according to the SNC report. No doubt improving the services and management systems of this sector, as well as integration of each service in terms of designing and management, are essential in minimizing the damages caused by floods and diseases.

Attainments of the CY2009 Policy Matrix

The CY2009 Policy Matrix sets five specific targets for improving water supply, waste water, and drainage management. The results of CY2009 actions' attainments in the Water Supply and Sanitation sector are summarized in Figure 4.

Water Supply and Sanitation

<CY2009> 1 outcome, 5 actions ◎:0 ○:3 △:2 X:0		
Outcome	Indication of CY2009 Actions	Category
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.)	Develop community based water supply and sanitation facilities in 1,650 villages under PAMSIMAS.	○
	Implement construction of 156 IKKs.	○
	Develop community based wastewater program (SANIMAS) in 110 locations.	△
	Design operation standard for sewerage service providers including corporate governance, tariff setting, service quality and technical guidance.	○
	Issue a Ministerial Decree on Strategy and Policy for Drainage Management.	△

◎:Exceedingly attained ○:Attained △:Substantial Progress ×:Unfulfilled

Figure 4. CY2009 Actions' Attainments in the Water Supply and Sanitation Sector

- All of the targeted 1,650 PAMSIMAS projects (100%) have been initiated; 1,556 projects (94%) have completed preparatory work and have signed contracts with the PU; 1,483 projects (90%) have received the first tranche of the budget, and 1,373 projects (83%) have completed implementation as of May 2010.
- A total of 174 IKK projects were implemented which exceeds the target of 156. However, it will take a few more years to commence operations because the completed work is only for water intake and treatment plants; the installation of water distribution pipes by the local governments will take time, which requires steady monitoring and follow up.
- Ninety-seven SANIMAS projects (88%) are being implemented and are expected to commence operations in 2010. The number of projects has not reach the stipulated target of 110 because application from local governments is limited due to the discouragingly large cost-sharing ratio. However, the number of projects is going to increase to more than 400 a year from 2010 onwards as a special allocation fund (DAK) amounting IDR350 billion is allocated for the sanitation sector, of which a large portion will be shared for SANIMAS projects. Now, the challenge is to setup a management system to implement such a large number of projects efficiently with limited staff.
- A 'draft management criteria for sewerage service providers' was prepared by a JICA study team in January 2010 in cooperation with the PU. Actual improvement of sewerage services and expansion of sewerage coverage areas through application of the new criteria are the remaining challenges.
- The concept of urban drainage and flood management promoted by the Directorate General of Human Settlements (DGHS) in the unissued Ministerial Decree on Strategy and Policy for Drainage Management is being incorporated in the Government Regulation on River Management, which is being prepared and going to be issued in 2010 by the Directorate

General of Water Resources (DGWR) through coordination of both DGs.

Agriculture sector

Background

Agriculture contributes to a significant portion of Indonesia's economy: Its share in total GDP and employment was reported at 12.9% in 2006 and 43.3% in 2004, respectively (ADB 2009)⁶. However, the nation is witnessing a decreasing trend of land fertility and water availability and has been struggling to feed its people because of the food price leap in the past three years, which has caused a decrease in food security (Hadar, 2009)⁷. Climate change is making such situations more challenging for agriculture. Extreme climate events in Indonesia are normally associated with El Niño Southern Oscillation (ENSO), the frequency of which is reported to be increasing (ADB 2009)⁸. To ensure the nation's food security and to safeguard its economy, the implementation of appropriate climate policies in agriculture is urgently needed.

Attainments of the CY2009 Policy Matrix

The CY2009 Policy Matrix lists five targets in the agriculture sector. These targets are aimed at strengthening the institutional and regulating framework in order to improve the resilience of farm production and reduce drought risk. Most targets in CY2009 have been achieved as of February 2010. The results of CY2009 actions' attainments in the Agriculture sector are summarized in Figure 5.

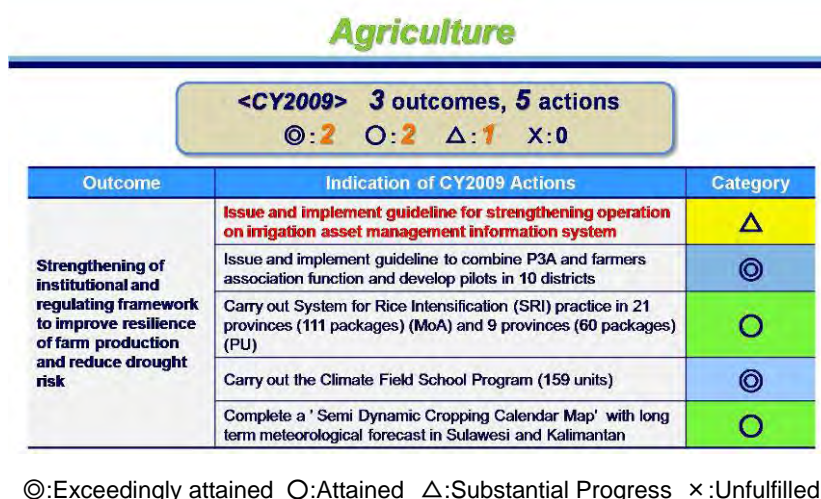


Figure 5. CY2009 Actions' Attainments in the Agriculture Sector

6,8 ADB 2009. The Economics of Climate Change in Southeast Asia: A Regional Review. Manila: ADB.

7 Hadar, Ivan A. 2009. Food security in RI: Time for policy change. Article published in the Jakarta Post, 28 April, 2009.

- A draft ministerial regulation on the irrigation asset management system was prepared in October 2009 and is expected to be approved in August 2010 (as of May 2010).
- The guideline for combining P3A and the farmers' groups was issued; however, it is currently under revision in consultation with the PU. A pilot project of LEPLI (Lembaga Ekonomi Pertanian Lahan Irigasi⁹) was launched in 14 districts (nine provinces) in CY2009. A case study was conducted to assess the effectiveness of each group's activity, the situations in which these activities take place, and the feasibility of merging the groups in the same year.
- As scheduled, all 111 packages by the MOA and 60 packages by the PU related to SRI (System of Rice Intensification) were implemented.
- Both the DGFC and the DGLWM of the MOA completed their target units of Climate Change Field Schools. In addition, the DGLWM achieved an additional 18 units by utilizing funds from another donor.
- Dynamic Cropping Calendar Maps were developed in both areas (Sulawesi and Kalimantan) as planned.

Disaster Management and Disaster Risk Reduction sector

Background

There is an urgent need to strengthen climate change adaptation policies in Indonesia because Indonesia's geographical features and its agricultural and fishery sectors, in terms of labour absorption, are vulnerable to the impact of climate change. For instance, temperature rise and precipitation change damages the Indonesian economy through increasing flood and drought. SNC warns that the poor are the most seriously affected by the increasing frequency and intensity of climate hazards because their limited resources and access to climate information and technologies limits their capacity to adapt to extreme climate events and future climate change.

Attainments of the CY2009 Policy Matrix

The Disaster Management and Disaster Risk Reduction sector was incorporated into the ICCPL framework from CY2009, with three anticipated outcomes: (i) Organizational strengthening for disaster management, (ii) improving Disaster Management Planning, Implementation and Evaluation, and (iii) mainstreaming the integration of Natural Disaster Management, Disaster Risk Reduction and Climate Change adaptation. The five target actions were achieved. The results of CY2009 actions' attainments in the Disaster Management and Disaster Risk

⁹ The name given to the new village organization: integrating P3A and farmers' groups. Tentative English translation is 'economic and agricultural institution on irrigation land'.

Reduction sector are summarized in Figure 6.

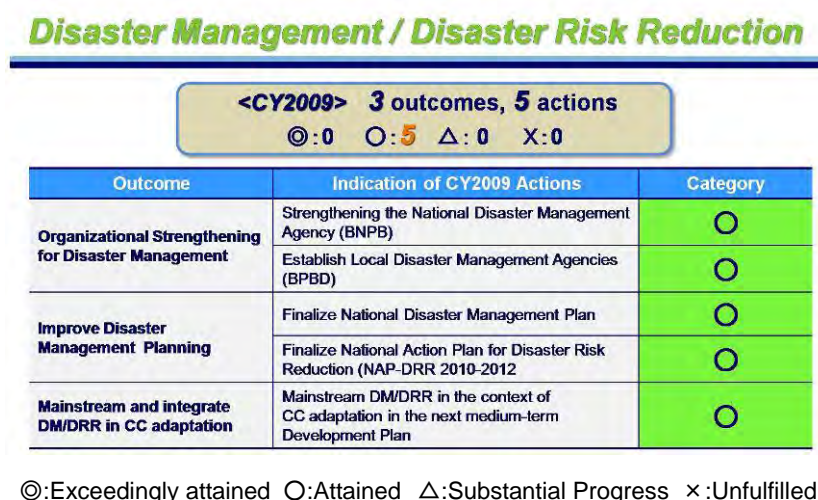


Figure 6. CY2009 Actions' Attainments in the Disaster Management and Disaster Risk Reduction Sector

The main developments are:

- The institutional strengthening of disaster management is in progress both at the national level and the local level. However, compared to the national agency (BNPB), which completed staff development by CY2009, the local agencies (BPBDs) still have a long way to go before they can function.
- Preparation of the two national plans—the National Disaster Management Plan and the National Action Plan for Disaster Risk Reduction—were completed slightly later than the original date of February 2010. Following their issuance, the GOI needs to encourage and support the local governments in developing action plans.
- The mainstreaming of disaster management and disaster risk reduction in the medium-term development plan has been attained, as the Medium Term National Development Plan includes statements on disaster risk and disaster management measures for the next five years.

Marine, Coral, and Fisheries sector

Background

Indonesia is known as the world largest archipelagic state, with 5.8 million km² of marine area. The estimated climate change impacts to its coastal ecosystem are: Sea level rise; change in surface temperature; change in water acidity; and increased frequency and intensity of extreme events such as tropical storms and high waves. The Indonesian fisheries sector will suffer from an inundation of cultured fisheries areas, loss of economic assets and infrastructure, increased

erosion, and damage to cultured sites and coastal biodiversity in coastal areas and small islands.

Attainments of the CY2009 Policy Matrix

The CY2009 Policy Matrix incorporated the Marine, Coral, and Fisheries sector with the outcome of strengthening institutional and regulatory framework in order to manage coastal zones and small islands. All of the specific target actions in this sector were successfully attained. The results of CY2009 actions' attainments in the Marine, Coral and Fisheries sector are summarized in Figure 7.

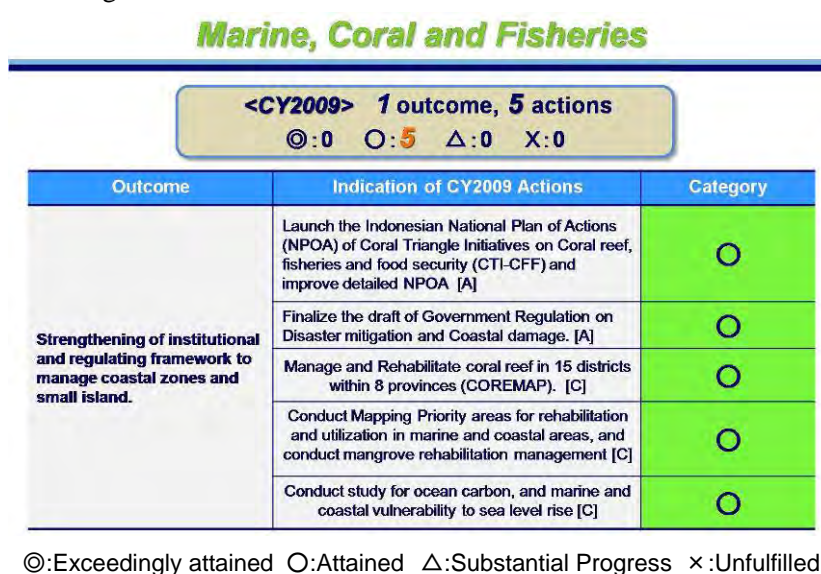


Figure 7. CY2009 Actions' Attainments in the Marine, Coral and Fisheries Sector

- Under the 10-year roadmap process of the Coral Triangle Initiatives on Coral Reef, Fisheries and Food Security (CTI-CFF), which was committed to by six countries (Indonesia, Malaysia, Papua New Guinea, the Philippines, the Solomon Islands, and Timor-Leste), the Indonesian National Secretariat for Coral Triangle Initiative (NSCTI) was established with 7 Working Groups. A draft National Plan of Action of Indonesia was finalized. The GOI also set 12 regions as priority and started a series of scientific studies on the management of the fisheries sector and seascapes.
- MMAF finalized the draft of Government Regulation on Disaster Mitigation and Coastal Damage and submitted it to the State Secretariat to be signed by the President and approved and recorded in the State Gazette.
- The management and rehabilitation of coral reefs in 16 districts in eight provinces under the Coral Reef Rehabilitation and Management Program (COREMAP) are being successfully implemented. This is being conducted through the establishment of marine conservation areas in 13 districts, 1,632 community groups, 298 information centres, and 54 sanitation facilities. Additionally, 732 extension workers have been recruited and village

funds and grants have been distributed to 257 villages.

- MMAF and local governments conducted the mapping of priority areas for rehabilitation and utilization in marine and coastal areas and developed tsunami hazard maps in Padang, Painan, Denpasar, Cilacap, and Gorontalo. MMAF and local governments have also conducted mangrove rehabilitation management in 6 out of 12 municipalities (expansion of about 110 ha, planting of 53,500 mangroves).

Cross-sectoral issues

Background

In addition to the above sectors, which address specific areas, climate policies require fundamentals related to both mitigation and adaptation. These fundamentals include institutional arrangements, an understanding of the conditions, preparation of plans and feasibility/pilot studies to design and implement effective on-the-ground actions.

Attainments of the CY2009 Policy Matrix

The CY2009 Policy Matrix includes seven of these essential policies as cross-sectoral issues. Most of the target actions were achieved in CY2009. The results of CY2009 actions' attainments in the Cross-sectoral issues are summarized in Figure 8.

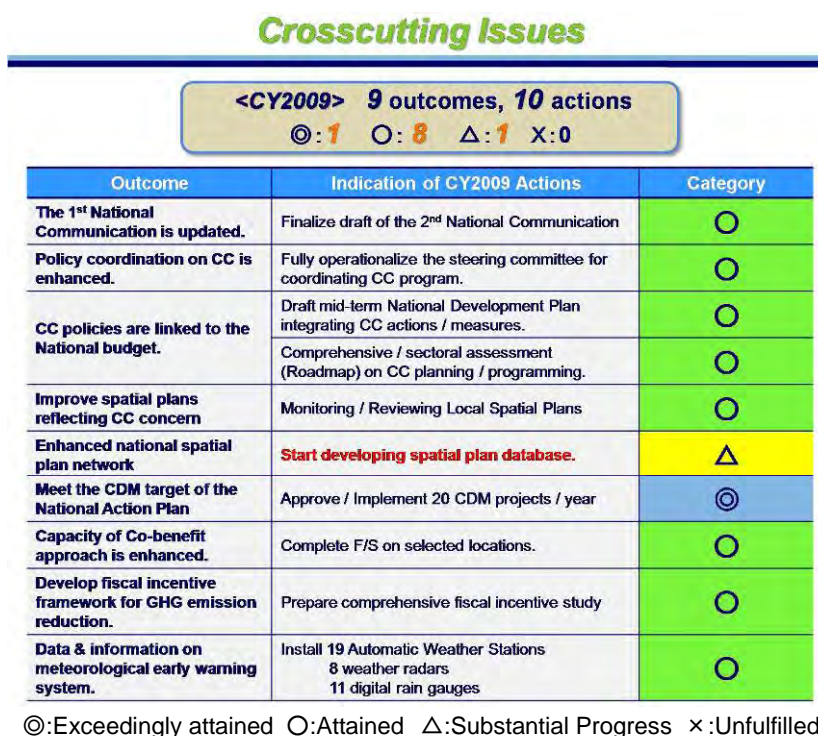


Figure 8. CY2009 Actions' Attainments in the Cross-sectoral issues

- All chapters of the Second National Communication were drafted and the preliminary documents completed in 2009. ‘The Summary for Policy Makers’ of SNC was issued in December 2009. The preliminary documents will be further revised until 2011, when the Second National Communication will be submitted to the UNFCCC.
- Steering committee meetings for the Climate Change Program Loan were convened three times in CY2009. In addition to this, two other steering committees were convened to discuss climate change issues and policies in Indonesia. These two committees were the Steering Committee Meeting for the Climate Change Roadmap and the Steering Committee Meeting for the Indonesian Climate Change Trust Fund.
- More local spatial plans were reviewed than in the previous year, although many remain to be reviewed. Although the efforts of the GOI are ongoing, development of the spatial plan network has been delayed due to delayed bidding/contracting.
- The NC-CDM had 34 projects approved in CY2009. When we consider the results in previous years—5 projects approved in 2005, 6 in 2006, 13 in 2007, and 46 in 2008—this is considered an appreciable trend.
- On-site studies of co-benefit pilots were conducted in October 2009 and January 2010 to collect data in both dry and rainy seasons. The feasibility study report was shared with KLH for consultation in March 2010.
- The Fiscal Policy Office of the Ministry of Finance together with AusAID conducted a study on the fiscal policies necessary to strengthening climate policies in Indonesia. This study was reported on in *Indonesia Green Paper: Economic and Fiscal Policy Options for Climate Change Mitigation in Indonesia* (MOF and Australia Indonesia Partnership, 2009)¹⁰.
- BMKG finished the installation of all equipment planned in CY2009 for meteorological early warning systems.

10 MOF and Australia Indonesia Partnership 2009. *Indonesia Green Paper: Economic and Fiscal Policy Options for Climate Change Mitigation in Indonesia*.