



IGES Market Mechanisms Country Fact Sheet

December 2013 VERSION

Information on market mechanisms including
the CDM and GHG emissions for each country

Cambodia



China



India



Indonesia



Korea



Lao PDR



Mongolia



Myanmar



The Philippines



Thailand



Viet Nam



Table of Contents

Cambodia	P. 1-6
China	P. 7-14
India	P. 15-20
Indonesia	P. 21-26
Republic of Korea	P. 27-32
Lao PDR	P. 33-36
Mongolia	P. 37-44
Myanmar	P. 45-46
The Philippines	P. 47-50
Thailand	P. 51-54
Vietnam	P. 55-62

Contents for Each Country

-  National Climate Change Policy
-  Market Mechanism Instruments
 - (1) Domestic market mechanism
 - (2) The Clean Development Mechanism (CDM)
 - (3) The Joint Crediting Mechanism (JCM)
-  Relevant information
 - (1) National GHG inventories
 - (2) Nationally Appropriate Mitigation Actions (NAMAs)

Abbreviations and Acronyms

AAU	Assigned amount unit
ACM	Approved consolidated methodology
AM	Approved methodology
AMS	Approved small scale methodologies
AR	Afforestation and reforestation
BAU	Business as usual
BM	Build margin
CDM	Clean development mechanism
CER	Certified emission reduction
DNA	Designated national authority
DOE	Designated operational entity
EB	CDM executive board
GEF	Grid emission factor
GHG	Greenhouse gas
JCM	Joint crediting mechanism
LoA	Letter of approval
NAMAs	Nationally appropriate mitigation actions
OM	Operating margin
PIN/PCN	Project idea note/ project concept note
PDD	Project design document
UNFCCC	United nations framework convention on climate change
VER	Verified emission reduction



Market Mechanism Country Fact Sheet: Cambodia

National Climate Change Policy in Cambodia

(1) Cambodia's Climate Change Strategic Plan (CCCSP)

(Launched on 5 November 2013)

Vision

Cambodia develops towards a greener, climate resilient, equitable, sustainable and knowledge-based society.

Mission

Creating a national framework for engaging public and private sectors, and civil society in a participatory process for responding to climate change to support sustainable development.

Goals

1. Reducing vulnerability to climate change impacts of critical (natural and societal) systems and most vulnerable groups
2. Shifting towards a green development path by promoting low-carbon development and appropriate technologies
3. Promote education and participation of the public in climate change response actions

Timeframe

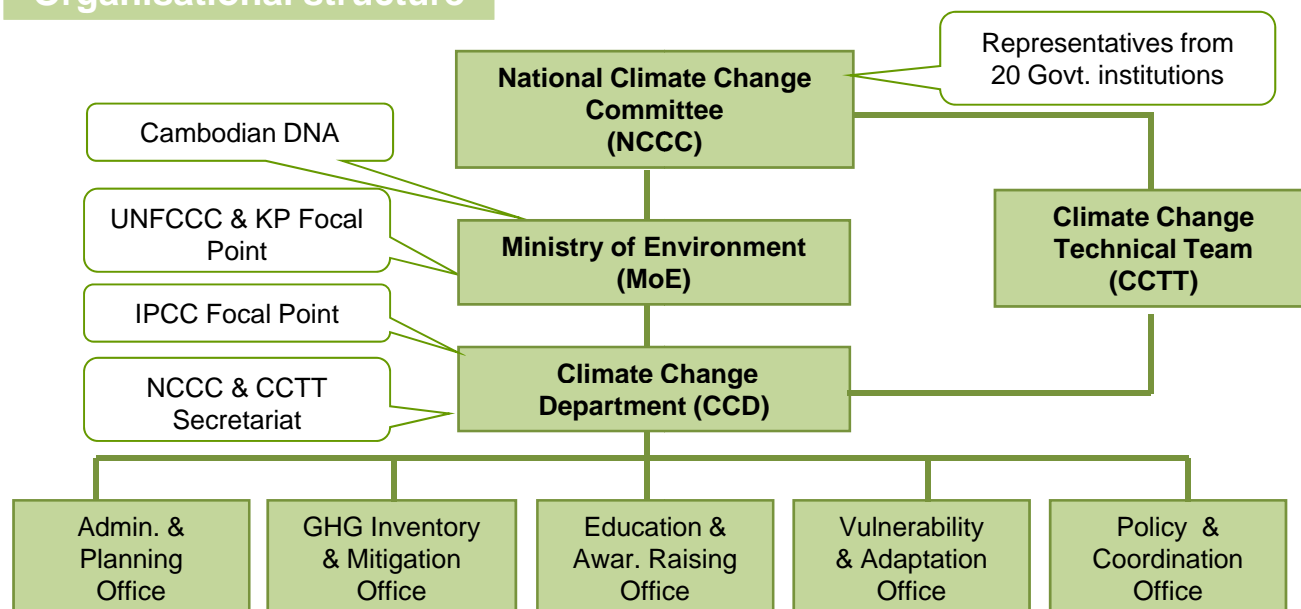
2014-2023 (10 years) with 5 years revision in line with the national strategic development plan mandate

Strategic objectives

1. Promote the climate resilience through improving food, water and energy securities
2. Reduce sectoral, regional and gender vulnerability to climate change impacts
3. Ensure climate resilience of critical ecosystems (Great Lake, Mekong River, Coastal ecosystems, highlands etc.), biodiversity, protected areas and cultural heritage.
4. Promote low-carbon planning and technologies to support sustainable development of the country.
 - a. Conduct option analyses on the low emission GHGs in sectors (agriculture, energy, transportation, industrial, land-use management, forestry and solid waste management) and source of emission.
 - b. Develop low-carbon development policies, strategies and action plans, well-coordinated with the green growth strategy, and ensure their implementation by strengthening: Laws, regulations and enforcement
 - c. Develop appropriate technological measures for promoting low-carbon development (e.g. improving energy efficiency, renewable energy etc.) and facilitating their diffusion
 - d. Establish GHGs project registration and mitigation programmes
5. Improve capacities, knowledge and awareness for climate change response.
6. Promote adaptive social protection and participatory approaches in reducing loss and damage.
7. Strengthen institutions and coordination frameworks for national climate change responses.

Source: Climate Change Department (CCD), Ministry of Environment, Cambodia (MoE)

Organisational structure



Source: CCD, MoE

Climate change response by sector (Mitigation)

Sector (Ministry in charge)	Objective and action plan /strategy
Manufacturing Industry and Energy (Ministry of Industry, Mine and Energy)	Climate change strategic plan for manufacturing industry and energy sectors Objective <ul style="list-style-type: none"> • To adopt, mitigate, prevent and reduce climate change impact from both sectors • To share all relevant data, information, knowledge and experiences to relevant sectors Specific action plan Industry sector <ul style="list-style-type: none"> •Hot-Spot (to identify , assess and prioritize of pollution in manufacturing industries) and TEST (Transfer of Environmentally Sound Technology in the Cambodian Mekong River Basin) •Energy efficiency in industry sector •Green Industry Award Energy sector <ul style="list-style-type: none"> •Policies development in energy sector •Environmentally sound energy development:
Transport (Ministry of Public Works and Transport)	Climate change strategic plan for transport sector Objective The objectives of the strategies are to develop efficient, comfortable and safe transport system, introduce modern public transport system, reduce traffic congestion, enhance inspection and maintenance of vehicles, to enhance traffic management, and enhance the quality of fuel. Strategy <ul style="list-style-type: none"> •To raise the public awareness about climate change caused by GHG emissions from transport sector •To enhance inspection and maintenance of vehicles •To promote public transport in major cities •Mitigation and low carbon development •Capital-intensive urban transport infrastructure development and planning •Efficient and proven transport technology •Improve petroleum-based fuel •Shift long distance freight movement from truck to train •Promotion of efficient driving

Source: Ministry of Industry, Mine and Energy
Ministry of Public Works and Transport

(2) Policies related to Green Growth

1. Law on Allowing the Kingdom of Cambodia a Membership to an Agreement on the Establishment on the Global Green Growth Institute (GGGI), 26 Dec 2012
2. Royal Decree on the Organization and Functioning of the National Council on Green Growth, 10 Oct 2012
3. Sub-decree on the Organization and Functioning of General Secretariat of National Council on Green Growth, 23 Oct 2012
4. National Policy on Green Growth, 1 Mar 2013
5. National Strategy Plan on Green Growth 2013-2030, 1 Mar 2013
6. Directive on appointment of members of National Council on Green Growth, 14 Mar 2013

National Policy on Green Growth

(Adopted on 1 March 2013)

Definition

Green Growth is stimulating comprehensive integration of the Kingdom of Cambodia into a regional framework and the world that helps contribute maintaining political and macroeconomic stability, especially the economic sector, environment, society, and culture progressing simultaneously towards harmonization, sustainability and balance, as well as enhancement of green economic growth, which maintains low carbon emission moving towards a society developed based on low carbon emission serving as a greenhouse reduction measure, climate change adaptation and poverty reduction in line with the Royal Government of Cambodia's goal to reduce poverty by one percent per year

Vision

The national policy is envisaged to strike balance of economic development with environment, society, culture, and sustainable use of national resources through integration, matching and adaptation, as well as harmonization between a green growth principle and national policy

Goal

The policy aims at enhancing the well-being and livelihood of all people in harmonization with ecological safety through green development growth, basing on green economy, blue economy, environment protection, social safety nets system and uphold of national cultural identity.

Strategy

1. International and national collaboration and coordination
2. Study, research and data analysis
3. Harmonization of green growth in the economy, society, and culture
4. Human resources development
5. Sustainable green technology development

Action plan

1. Creating mechanism
2. Creating a legal framework
3. Financial support
4. Human resources development
5. Implementation process

Source: National Council on Green Growth, National Policy on Green Growth

Strategic direction

1. Green investment and green jobs creation
2. Green economy management in balance with environment
3. Blue economy development with sustainability
4. Green environment and natural resources management
5. Human resources development and green education
6. Effective green technology management
7. Promotion of a green social safety system
8. Uphold and protection of green cultural heritage and national identity
9. Good governance on green growth

Organisational structure



- Member of National Council on Green Growth

- Honorable chair: Prime Minister
- Chairman: Senior Minister and Minister of Environment
- Vice chairman: Minister of Agriculture, Forestry and Fishery and Senior Minister and Minister of Planning
- 23 Secretary of State of line ministries
- 6 Secretary-Generals of related organizations
- 24 Governors

- Role and responsibility of National Council on Green Growth

- Prepare legal norms, policies, strategic plans, activity plans and programmes related to green growth
- Integrate green growth principles into all works including green environment and natural resources water resources and sanitations, food security and safety with sustainable land use, economy investment, transportation, industry and energy, tourism in the national development strategies
- Green technological transfer in regional and global frameworks
- Strengthen international cooperation with implemented participation of international green growth policies, conventions, agreements, and protocols that Cambodia was a membership
- Encourage and promote an education, training of green growth for public, private and civil society sectors, etc.

Market Mechanism Instruments

(1) The Clean Development Mechanism (CDM)

CDM projects and PoAs status

Status	Number of projects	Number of PoAs
Registered	9	0
At or after the validation stage	1	0

List of registered CDM projects

Title	Type of Project	Emission reductions (t-CO ₂ /y)	Project Participants (Host Country)
Angkor Bio Cogen Rice Husk Power Project	Biomass	51,620	Angkor Bio Cogen Co., Ltd.
T.T.Y. Cambodia Biogas Project	Biogas	50,036	T.T.Y Agricultural Plant Development and IMEX Co. Ltd; Carbon Bridge Pte Ltd
Methane fired power generation plant in Samrong Thom Animal Husbandry,	Biogas	5,593	Samrong Thom Animal Husbandry
Kampot Cement Waste Heat Power Generation Project (KCC-WHG)	Waste heat/gas utilisation	17,107	Kampot Cement Company Co., Ltd.
Biogas Project at MH Bio-ethanol Distillery, Cambodia	Biogas	58,146	MH Bio-Energy Co., Ltd
W2E Siang Phong Biogas Project Cambodia	Biogas	26,592	W2E Siang Phong Ltd
Lower Stung Russei Chrum Hydro-Electric Project	Hydro	701,199	China Huadian Lower Stung Russei Chrum Hydro-Electric Project (Cambodia) Co., Ltd.
Cambodia Stung Atay Hydropower Project	Hydro	266,472	C.H.D (Cambodia) Hydropower
Stung Tatay Hydroelectric Project	Hydro	563,074	Cambodian Tatay Hydropower Ltd.

Source: IGES, IGES CDM Project Database (as of 30 October 2013), IGES CDM Programmes of Activities Database (as of 29 November 2013)
<http://www.iges.or.jp/en/climate-energy/mm/publication.html#03>

Approved Standardized Baseline

Title	Sector	Approved methodology	Approval in EB meeting
Standardized baseline : Technology switch in the rice mill sector of Cambodia	Rice mill	AMS-I.B.	EB76, November 2013

Source: UNFCCC http://cdm.unfccc.int/methodologies/standard_base/index.html

Grid emissions Factors

Year	Regional Grid	Covered Region	Operating Margin (OM)	Build Margin (BM)
2011	Phnom Penh Grid	Phnom Penh, parts of Kandal, Kampong Speu and Takeo Provinces	0.6257	0.6878

(t-CO₂/MWh)

Source: CCD, MoE <http://www.camclimate.org.kh/index.php?page=searchdocument&docid=b53>

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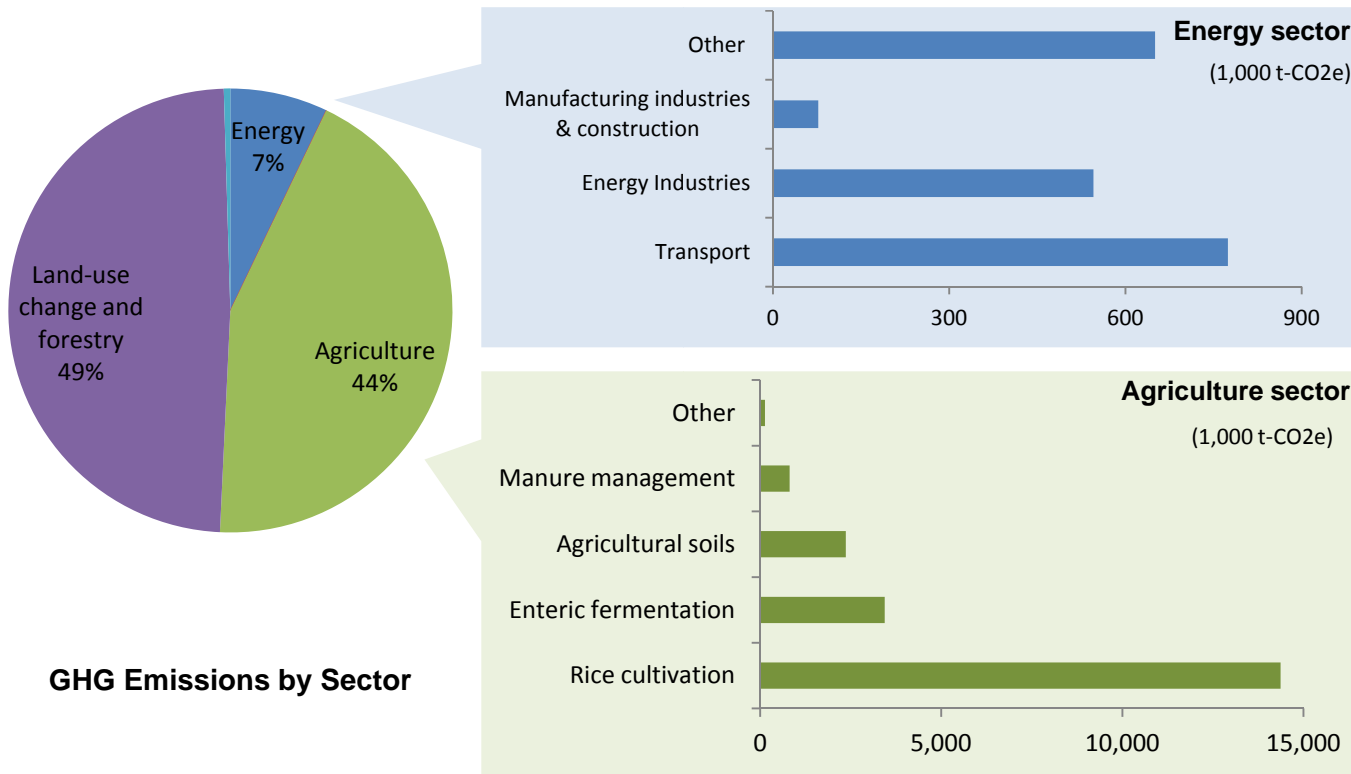
E-mail: ETAP@online.com.kh, cceap@online.com.kh Website: <http://www.camclimate.org.kh/>

Relevant information

(1) National GHG Inventories

Year 2000 (1,000 t-CO₂e)

Total emissions and removals	218
Emissions	48,383
Removals	-48,165



Source: CCD, MoE

Submission of National Communications

First	8 October 2002
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Source: UNFCCC http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php



Market Mechanisms Country Fact Sheet: People's Republic of China

National Climate Change Policy in China

Policies	<ul style="list-style-type: none"> • China's 12th Five-Year Plan(FYP) (Part 6-Chapter 21) • The Comprehensive Working Plan for Energy Conservation and Emission Reduction in the 12th FYP Period • The Work Plan for Controlling Greenhouse Gas Emissions During the 12th FYP Period • Conserving Energy in the Construction Sector During the 12th FYP • The Work Plan for Controlling Greenhouse Gas Emissions During the 12th FYP Period in the Transport Industry • The Development Plan for Renewable Energy During the 12th FYP Period • The Action Points for China's Forestry Departments in Response to Climate Change During the 12th Five Year Plan (2011-2015) Period • The National Plan for the Development of Science and Technology on Climate Change during the 12th FYP Period
Objective	<p>Medium-term goals(by 2020, compared with 2005)</p> <ul style="list-style-type: none"> • Reduce GHG per-unit GDP by 40-45% • Increase non-fossil energy to 15% of total primary energy consumption by 2020 • Increase the forest area by 40 MHA, volume of trees by 1.3 billion m³ <p>Targets of 12th FYP(by 2015, compared with 2010)</p> <ul style="list-style-type: none"> • Decrease CO₂ emission per-unit of GDP by 17%, energy consumption per-unit of GDP by 16% • Raise the proportion of non-fossil fuels in the overall primary energy mix to 11.4 % • Increase the forest area by 12.5 MHA, raise forest coverage to 21.66%
Target sectors	Industry, Energy, Transportation, Agriculture and Forestry

Source: Central People's Government of the People's Republic of China and National Development and Reform Commissions (NDRC)
http://www.gov.cn/2011/11/content_1825838.htm

(1) GHG Mitigation Policies and Measures

Area	Objective	Measures
Adjusting industrial structure	Transforming and upgrading traditional industries	<ul style="list-style-type: none"> • Raised the entry threshold for industries by enhancing the evaluation and examination for energy saving, and improving the assessment of environmental impact and the pre-examination of land resources for construction, to strictly control the launch of the industries with high energy consumption, high emissions or excess capacity.
	Supporting the new emerging industries	<ul style="list-style-type: none"> • Specified the seven strategic emerging industries – energy conservation and environmental protection, new-generation information technology, biology, high-end equipment manufacturing, new energy, new materials and new-energy vehicles. • 38 billion Yuan funds have been set up
	Speeding up the elimination of backward production capacity	<ul style="list-style-type: none"> • In June 2012, set a goal of eliminating 19 industries with backward production capacity and subsequently announced a name list of the enterprises concerned. It required local governments to break down the tasks and assign them to cities, towns and enterprises. • Eliminated obsolete production capacity in 2012 (it started from 2005):iron smelting, 10.78 million tons; steel production, 9.37 million tons; coke, 24.93 million tons; cement, 258.29 million tons; plate glass, 59.56 million cases; paper, 10.57 million tons; printing and dyeing, 3.26 billion meters; lead battery, 29.71 million kvah.

Policy Name	Objective	Policies and Measures
Optimizing energy structure	Promoting the clean utilization of fossil fuel	<ul style="list-style-type: none"> • Announced the Development Plan for Shale Gas (2011-2015) with special funds • Increasing the supply capacity of natural gas to 176 billion m³ by 2015 • Stipulates the goals and requirements for controlling the consumption cap of coke and increasing the utilization of clean energy. • By the end of 2012, the rate of thermal power units above 300,000 KWH raised to 75.6 %, a year-on-year growth of 1.2 %. • The demonstration power station Tianjin Huaneng IGCC, designed, constructed and operated by China, was put into operation in December 2012.
	Developing non-fossil fuel	<ul style="list-style-type: none"> • Issued the Interim Measures on the Management of the Additional Subsidy Funds for Prices of Electricity from Renewable Energies, in order to subsidize renewable energies. • Determination of purchase price • The Development Plan for Renewable Energy During the 12th FYP Period
Energy efficiency	Enhancing the evaluation of energy saving accountabilities	<ul style="list-style-type: none"> • Strengthen the Target Responsibility System (TRS): TRS aims to distribute FYP's national energy intensity targets (table 1) to local governments and enterprises as mandatory targets with punitive measures for the personnel in charge (limited to public-private enterprises), if they fail to achieve mandatory targets (table :12th FYP energy intensity and CO₂ reduction targets (2011-2015))
	Implementing key energy conservative projects	<ul style="list-style-type: none"> • Since 2012, invested over 7.6 billion Yuan to supporting 2,411 projects regarding high-efficiency, energy-saving technologies, model products and industries, contracted energy management, developing energy-saving monitoring institutions, energy-saving buildings and green lighting. • The total of investment in 11th FYP was 225 billion Yuan.
	Improving energy efficiency standard and labeling scheme	<ul style="list-style-type: none"> • Issued and applied over 60 energy saving standards, including limiting unit product energy consumption for high consumption industries. • Issued and applied over 60 standards concerning new energy vehicles. • By the end of May 2013, the energy efficiency labeling scheme has covered 28 kinds of terminal use products.
	Expanding energy conservative technologies and products	<ul style="list-style-type: none"> • Listed and recommended over 800 key low carbon technologies in 20 industries. • Promoted the second government green-procurement list. • continue to expand the benefits of energy saving projects for citizens. The projects distributed over 90 million energy-saving electric home appliances, over 3.5 million energy-saving vehicles, over 14 million kw of energy-efficient electrical machines and 160 million energy-saving green lighting products.
	Driving energy conservation in transportation industry	<ul style="list-style-type: none"> • Issued the 12th FYP for Conserving Energy in the Construction Sector • All new buildings with total of 6.9 billion m² of floor space reached the new energy saving standard in 2012. • Completed heat metering and energy efficiency renovations on 590 million m² of buildings in northern China in 2012.
Forest carbon sinks	Increasing Forest Carbon Sinks	<ul style="list-style-type: none"> • launched a pilot program for sustainable management in 200 towns (forestry farms), taking lumbering as the center of the management. • The national monitoring system on forest sinks has expanded to the whole country; the national data base and parameter model base for forestry sink calculation has been built as initial stage.
Other areas	Agriculture	<ul style="list-style-type: none"> • Promoting protective agrarian technologies in 204 towns (cities); The area of protective agrarian land increased to 1.64 MHA; The government invested 300 million Yuan as protective project funds • The central government invested 3 billion yuan to continue standardizing farming areas and setting up waste treatment facilities.
	Tightening control over CO ₂ greenhouse gas	<ul style="list-style-type: none"> • Controlling the methane emissions during treatment of garbage sewage actively . By the end of 2012, the garbage treatment rate reached 76 %; The majority of dumping grounds had collected, tunneled and treated emissions form garbage underground. • Issued six plans for consumer industries and one plan for contracted capacity amid the first phase of the elimination of HCFCs which project to reduce 200 million tons of CO₂.

Source: China's Policies and Actions for Addressing Climate Change (2013)
<http://www.sdpc.gov.cn/gzdt/W020131107539684396470.pdf>

Target

12th FYP energy intensity and CO2 reduction targets (2011-2015)

Province	CO2 emissions reduction per unit of GDP (%)	Energy consumption reduction per unit of GDP(%)
Beijing	18	17
Tianjin	19	18
Hebei	18	17
Shanxi	17	16
Inner Mongolia	16	15
Liaoning	18	17
Jilin	17	16
Heilongjiang	16	16
Shanghai	19	18
Jiangsu	19	18
Zhejiang	19	18
Anhui	17	16
Fujian	17.5	16
Jiangxi	17	16
Shandong	18	17
Henan	17	16
Hubei	17	16
Hunan	17	16
Guangdong	19.5	18
Guangxi	16	15
Hainan	11	10
Chongqing	17	16
Sichuan	17.5	16
Guizhou	16	15
Yunnan	16.5	15
Tibet	10	10
Shaanxi	17	16
Gansu	16	15
Qinghai	10	10
Ningxia	16	15
Xinjiang	11	10

Source: The Central People's Government of the People's Republic of China http://www.gov.cn/zwgk/2012-01/13/content_2043645.htm

(2) Organisational structure

China's National Leading Group on Climate Change

Composition:

Ministry of Foreign Affairs
 National Development and Reform Commission (NDRC)
 Ministry of Science and Technology
 Ministry of Industry and Information Technology
 Ministry of Finance
 Ministry of Land and Resources
 Ministry of Environmental Protection
 Ministry of Housing and Urban-Rural Development
 Ministry of Transport

Ministry of Water Resources
 Ministry of Agriculture
 Ministry of Commerce
 Ministry of Health
 National Bureau of Statistics
 State Forestry Administration
 Chinese Academy of Sciences
 China Meteorological Administration
 National Energy Administration
 China Civil Aviation Administration
 State Oceanic Administration

National Leading Group on Climate Change Office: NDRC
Implementation Unit: Department of Climate Change, NDRC

Provincial Leading Group on Climate Change

Composition:

Provincial Development and Reform Committee (PDRC)
 Provincial Finance Department
Office of Leading Group on Climate Change: PDRC

Source: NDRC, The second national communication on climate change of the People's Republic of China http://unfccc.int/essential_background/library/items/3599.php?rec=j&preref=7666#beg

(3) Low carbon provinces and cities

First Phase: 5 Provinces and 8 Cities (Announced on July 2010)

Provinces: Guangdong, Hubei, Liaoning, Shaanxi, and Yunnan

Cities: Baoding, Chongqing, Guiyang, Hangzhou, Nanchang, Shenzhen, Tianjin and Xiamen

Second Phase: 1 province and 28 cities (Announced on November 2012)

Provinces: Hainan

Cities: Shijiazhuang, Qinhuangdao, Jincheng, Hulunbeier, Jilin, Daxinganling, Suzhou, Huaian, Zhenjiang, Ningbo, Wenzhou, Chizhou, Nanping, Jingdezhen, Ganzhou, Qingdao, Jiyuan, Wuhan, Guangzhou, Guilin, Guangyuan, Zunyi, Kunming, Yanan, Jinchang and Urumqi

Strategic Goal

To promote the low carbon development and economy restructuring, and to achieve the goal of control greenhouse gas emissions by 2020.

Measures

- (1) Prepare low carbon development plan.
- (2) Measures and policies on the support for low carbon development
- (3) Establish the industry system with the characteristic of low carbon society
- (4) Establish the Greenhouse gas emissions data statistic and management system.
- (5) Promote the low carbon life style and consumption style.

Source: Notification by NDRC

1st Phase notification: http://www.sdpc.gov.cn/zcfb/zcfbtz/2010tz/t20100810_365264.htm

2nd Phase notification: http://qhs.ndrc.gov.cn/qzdt/t20121205_517419.htm

Market Mechanisms Instruments

(1) Domestic market mechanisms

China voluntary offset credit scheme*

Policy	The regulation for the voluntary offset credit scheme* (adopted on 13 June 2012)
Competent authority	National Development and Reform Commission (NDRC)
Scope of gas	CO ₂ , CH ₄ , N ₂ O, HFCs, PFCs and SF ₆
Trading Participant	National and international organizations, enterprises and individuals
Requirements to the projects	<ol style="list-style-type: none"> 1) Projects that adopt the methodologies announced by NDRC. 2) Projects that are approved as CDM by NDRC but not registered by CDM EB 3) Projects that are approved as CDM by NDRC and generate emission reductions before registration by CDM EB. 4) Projects that are registered by CDM EB but not issue CERs.
Type of project	Renewable energy, Energy efficiency, Biogas, HFC reduction/avoidance and N ₂ O decomposition etc
Credit	China certified emissions reduction (CCER)
Methodology	Methodologies announced by NDRC http://cdm.ccchina.gov.cn/nDetail.aspx?newsId=39507&TId=20

*The literal translation of this scheme is a voluntary greenhouse gas emission trading scheme. Words of "voluntary offset credit scheme" was applied here, because this scheme is categorized as a baseline and credit scheme (offset scheme) rather than a cap and trade scheme (emissions trade scheme).

Source : NDRC http://qhs.ndrc.gov.cn/zcfg/t20120621_487133.htm

Carbon Emissions Trading Pilots in 2 provinces and 5 cities

The notification for launching pilot greenhouse gas emission rights trading scheme (2011)

Provinces: Guangdong and Hubei

Cities: Beijing, Chongqing, Shanghai, Shenzhen and Tianjin

Strategic Goal

Utilizing market mechanism to achieve the GHG emission control goal until 2020 with relevant low cost

Measures

- Develop the pilot carbon emissions trading administrative measures and rules
- Measure and define the regional GHG emission control target
- Develop GHG allowance distribution plan
- Establish the regional carbon emissions trading regulator and registration system as well as the trading platform



Source: NDRC http://www.ndrc.gov.cn/zcfb/zcfbtz/2011tz/t20120113_456506.htm

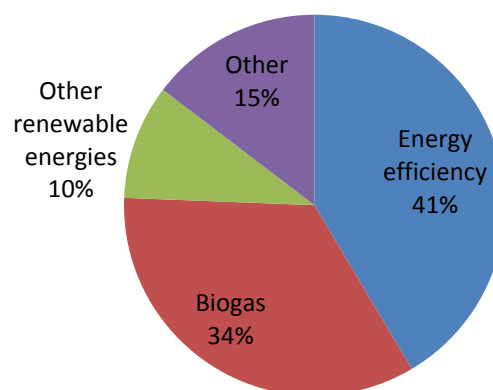
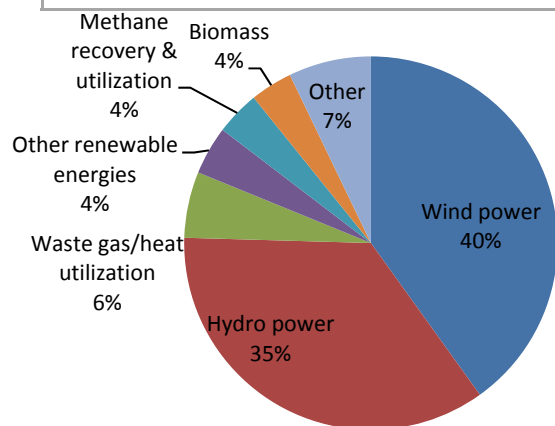
Current progress

City/Province		Beijing	Shanghai	Tianjin	Shenzhen	Guangdong	Hubei	Chongqing
Scope	Entities	490	191	130	832	242	153	300
	Manufacturing	around 150	around 140	130	635	242	153	300
	Non-manufacturing	around 340	around 50					
	Building				197			
	Threshold	10,000t/y or more average emissions from 2009 to 2011	10,000t/y or more for manufacturing ; 20,000t/y or more for non-manufacturing in 2010 or 2011	10,000t/y or more emissions for manufacturing from 2009 to 2011	10,000t/y or more emissions for manufacturing ; building area 20,000 m ² or more from 2009 to 2011	20,000t/y or more emissions for manufacturing in 2011 or 2012	60,000tce/y or more energy consumption for manufacturing in 2011 or 2011	10,000t/y or more emissions for manufacturing ;
	Gas	CO ₂	CO ₂	CO ₂	CO ₂	CO ₂	CO ₂	CO ₂
Transaction	Starting date	28 Nov 2013	26 Nov 2013	—	16 Jun 2013	—	—	—
	Compliance period	2013-2015	2013-2015	2013-2015	2013- 2015	2013-2015	until 2015	until 2015
Allowance	Coverage ratio	40%	50%	60%~70%	54%	42%	35%	35%-45%
	Allocation methods	Free and auctioning	Free and auctioning	Free and auctioning	Free and auctioning	Free(90%) and auctioning (10%)	Free(90%) and auctioning (10%)	—
		Annual allowance	Allocate all at once	Annual allowance	Allocate all at once	Allocate all at once	Annual allowance	Allocate all at once
Adjustment	adjust every year	—	adjust every year	adjust every year	adjust every year	adjust every year	—	
Performance of duties	Methods	—	Surrender substantial amount of allowances based on actual emissions	Surrender substantial amount of allowances based on actual emissions	—	Surrender substantial amount of allowances based on actual emissions	Surrender substantial amount of allowances based on actual emissions	—
	Use of external credit (upper limit)	CCER (5%)	CCER (—)	CCER (10%)	CCER (—)	CCER (10%)	CCER (10%)	—
	Banking	Allowed	Allowed	—	Allowed	Allowed	Not allowed	—

(2) The Clean Development Mechanism (CDM)

CDM projects and PoAs status

Status	Number of projects	Number of PoAs
Registered	3726	41
At tor after he validation stage	257	17



CDM projects

PoAs

Registered projects and PoAs by type

Source: IGES, IGES CDM Project Database (as of 30 October 2013), IGES CDM Programmes of Activities Database (as of 29 November 2013)
<http://www.iges.or.jp/en/climate-energy/mm/publication.html#03>

Grid emission factor

: (t-CO₂/MWh)

Regional Grid	Covered Region	2008 BM	2009 BM	2010 BM	2008-2010 Average OM	2009-2011 Average OM
North China Grid	Beijing, Tianjin, Hebeim Shanxi, Shandong, Inner-Mongolia	0.7495	0.6426	0.5940	1.0021	1.0302
Northeast China Power Grid	Liaoning, Jilin, Heilongjiang	0.7086	0.5987	0.6104	1.0935	1.1120
East China Grid	Shanghai, Jiangsu, Zhejiang, Anhui, Fujian	0.6789	0.6622	0.6889	0.8244	0.8100
Central China Power Grid	Henan, Hubei, Hunan, Jiangxi, Sichuan, Chongqing	0.4543	0.4191	0.4733	0.9944	0.9779
Northwest China Power Grid	Shaanxi, Gansu, Qinghai, Ningxia, Xinjiang Uyghur	0.6878	0.5851	0.5398	0.9913	0.9720
Southern China Power Grid	Guangdon, Jiangxi, Yunnan, Guizhou, Hainan	0.4506	0.3157	0.3791	0.9344	0.9223
Hainan Province China Power Grid	Hainan Province	0.7328	NA	NA	NA	NA

Source: IGES, List of grid emission factor (as of 1 December 2013) <http://www.iges.or.jp/en/climate-energy/mm/publication.html#03>

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 E-mail: Mr. Wang Shu (wangs@ndrc.gov.cn, wangshu@ccchina.gov.cn)
 Website: Clean Development Mechanism in China <http://cdm-en.ccchina.gov.cn/>
 China Climate Change Info-Net <http://www.ccchina.gov.cn/>

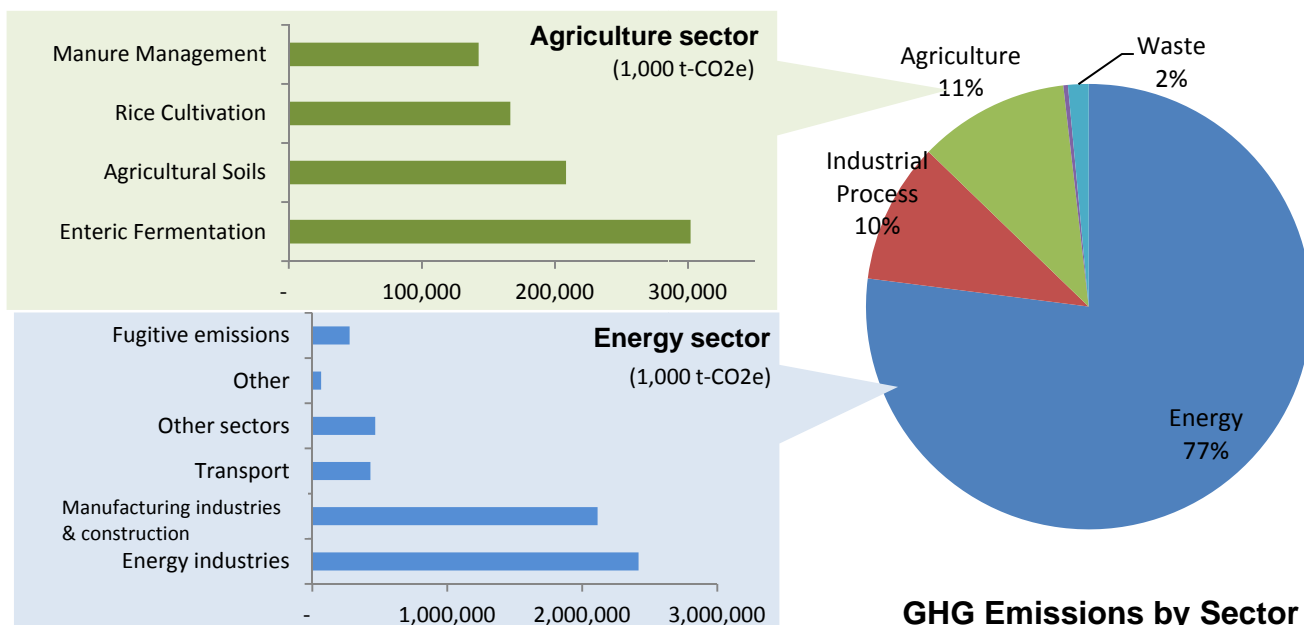
Relevant information

(1) National GHG inventories

Year 2005

(1,000 t-CO₂e)

Total emissions and removals	7,045,044
Emissions	7,491,384
Removals	-446,340



Source: NDRC, The second national communication on climate change of the People's Republic of China http://unfccc.int/essential_background/library/items/3599.php?rec=j&preref=7666#beg

Submission of National Communications

First	10 December 2004
Second	8 November 2012

Source: UNFCCC http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php

(2) Nationally Appropriate Mitigation Actions (NAMAs)

Status of NAMA Submission

Publication Date	28 January 2010
Emission Reduction Goal	Reduce 40-45% Per GDP GHG emission by 2020
Baseline year	2005

Source: UNFCCC http://unfccc.int/meetings/cop_15/copenhagen_accord/items/5265.php

Target by city and province

Pilot cities and provinces	Emissions Reduction Target (2011-2015/Baseline 2010)	
	Energy intensity	Carbon intensity
Beijing	17%	18%*
Shanghai	18%	19%*
Chongqing	16%	17%*
Guangdong	18%	18%*

Source: Energy Conservation and Emission Reduction 12th Five Year Work Plan, 2011. http://www.gov.cn/zwqk/2011-09/07/content_1941731.htm
 Beijing 12th Five Year Plan, 2011. http://www.bjpc.gov.cn/zt/125ny/nygh/erzhang_ny/201105/t804923.htm
 Shanghai: China-ASEAN Environmental Cooperation Centre <http://www.chinaaseanenv.org/zhxx/hjyw/271347.shtml>
 Chongqing Municipal People's Government: <http://www.cq.gov.cn/today/news/321517.htm>
 Guangdong 12th Five Year Plan, 2011 http://www.rd.gd.cn/dhl/rdhyzy2/syjsic/dhwj/sewgh/201101/t20110126_114916.html



Market Mechanisms Country Fact Sheet: India

National Climate Change Policy in India

(1) National Action Plan for Climate Change (NAPCC)

(Announced in 2008)

Objective

To achieve a sustainable development path that simultaneously advances economic and environmental objectives

Principles

- Protecting the poor and vulnerable sections of society through an inclusive and sustainable development strategy, sensitive to climate change
- Achieving national growth objectives through a qualitative change in direction that enhances ecological sustainability, leading to further mitigation of greenhouse gas emissions
- Devising efficient and cost-effective strategies for end use Demand Side Management
- Deploying appropriate technologies for both adaptation and mitigation of greenhouse gases emissions extensively as well as at an accelerated pace
- Engineering new and innovative forms of market, regulatory and voluntary mechanisms to promote sustainable development

National Missions

Mitigation

National Solar Mission

- 20,000 MW of solar power by 2022

National Mission for Enhanced Energy Efficiency

- Energy saving of 23 million tones of oil equivalent by 2015

Adaptation

National Mission for Sustainable Habitat

- EE in residential & commercial buildings, public transport, solid waste management

National Water Mission

- Water conservation, river basin management

National Mission for Sustaining the Himalayan Ecosystem

- Conservation & adaptation practices, glacial monitoring

National Mission for a Green India

- 6 mn hectares of afforestation over degraded forest lands by the end of 12th Plan

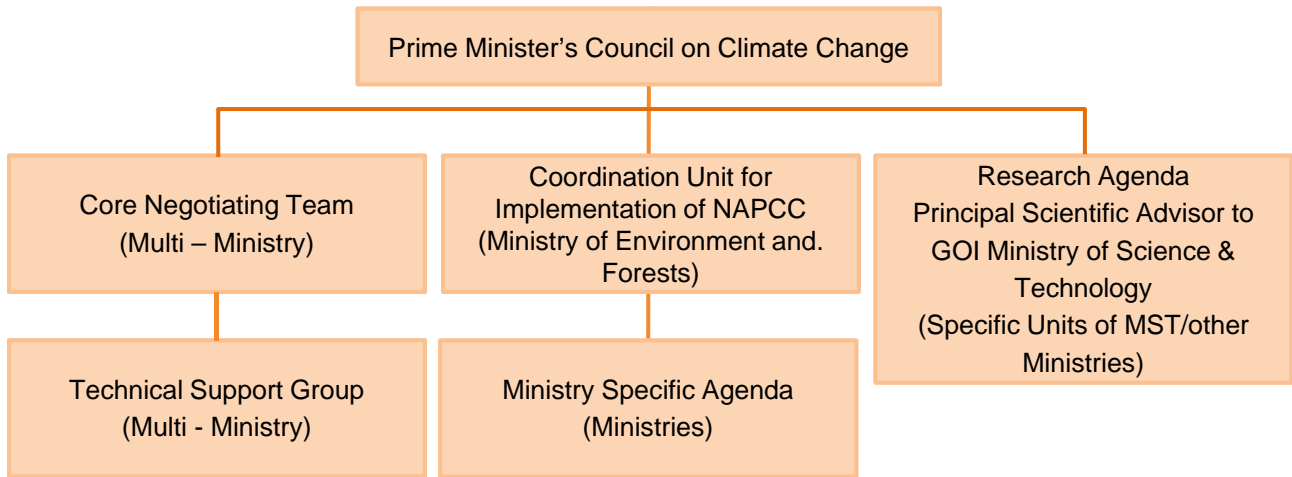
National Mission for Sustainable Agriculture

- Drought proofing, risk management, agricultural research

Overall

National Mission on Strategic Knowledge for Climate Change

- Vulnerability assessment, Research & observation, data management



Market Mechanism Instruments

(1) Domestic Market Mechanism

PAT (Perform Achieve & Trade) scheme

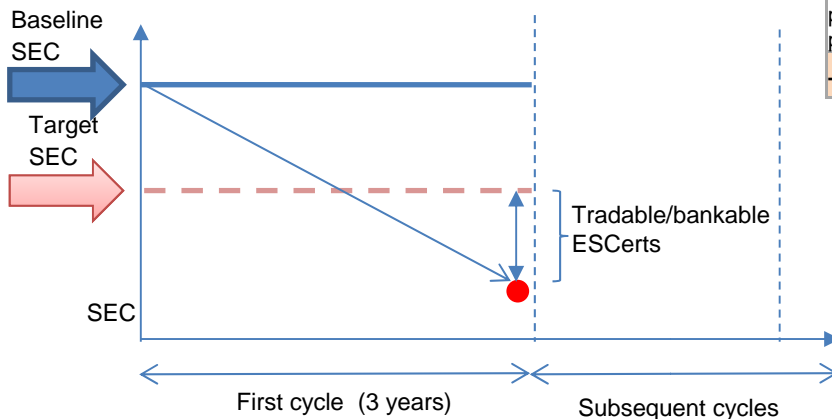
PAT is India's scheme for incentivising energy efficiency improvement, which is traded as Energy Saving Certificates (ESCerts). The idea of PAT was introduced as early as 2001 as a part of Energy Conservation Act and its operation started in 2012. It obliges more than 500 entities in 8 sectors, covering 54% of India's energy consumption, to achieve Specific Energy Consumption (SEC).

- Each DC has specific target set by % reduction based on the current energy efficiency
- Energy source is converted into Metric Ton of Oil Equivalent (MTOE)
- DCs shall comply with targeted SEC
- DCs can buy Energy Saving certificates (ESCerts) in case of not meeting the target
- DCs shall pay a penalty for non-compliance

Energy Saving Targets

Sector	Energy consumption in 2007 (mMTOE)	Energy saving targets by 2015	
		(mMTOE)	(%)
Aluminium	2.42	0.11	4.55%
Cement	14.47	0.6	4.15%
Chlor-alkali	0.43	0.02	4.65%
Fertiliser	11.95	0.51	4.27%
Iron and steel	36.08	1.56	4.32%
Pulp and paper	1.38	0.06	4.35%
Textiles	4.5	0.2	4.44%
Thermal power plants	160.3	6.92	4.32%
Total	231.53	10	4.32%

Crediting mechanism



Source: Bureau of Energy Efficiency, Energy Conservation Act 2001. <http://unfccc.int/resource/docs/natc/indnc1.pdf>
National Action Plan for Climate Change. http://pmindia.nic.in/climate_change.htm

REC (Renewable Energy Certificate) scheme

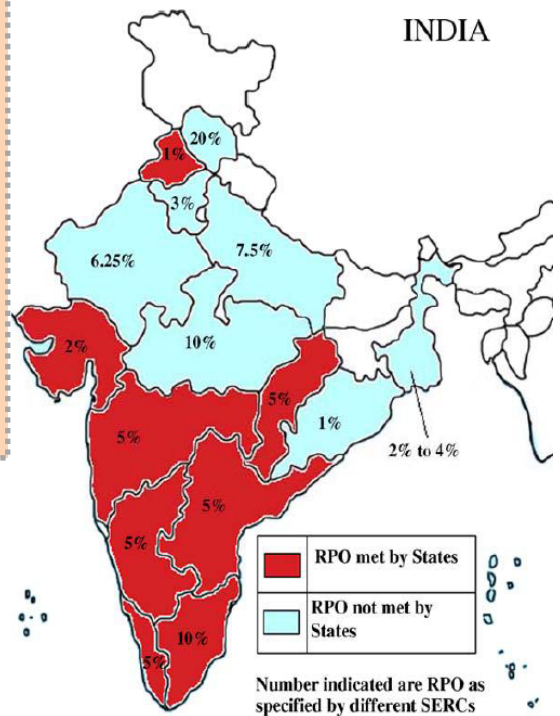
REC scheme was launched in 2010 as a scheme to promote the use of renewable energy and fill the regional gap in renewable energy availability. In essence:

- Renewable energy generators can apply for REC issuance by applying to the Central Authority.
- REC are distinguished by solar and non-solar types, and issued for every 1MWh of electricity injected into the grid. Each REC is valid for one year.
- REC can be purchased by obligated entities to meet their Renewable Purchase Obligation (RPO).

Since 1 December 2011 to 9 December 2012, 3.72 billion kWh of REC have been issued.

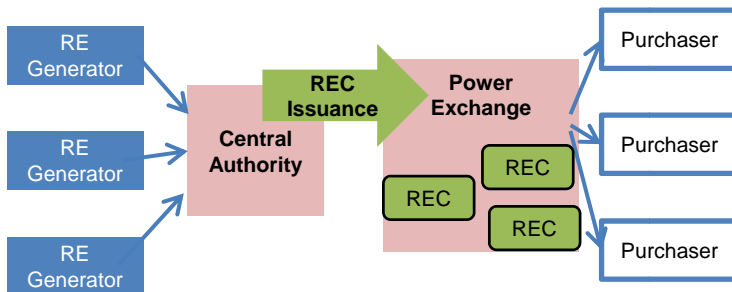
Note: RPO is required under Electricity Act (2003) and set by State Electricity Regulatory Commission (SERC) in each state. Northern states tend to face challenges in meeting their RPO requirements.

Snapshot of state-wise policies (minimum RPO obligation numbers for FY09)



Source: Mohit Goyal, Rakesh Jha. Introduction of Renewable Energy Certificate in the Indian scenario, ScienceDirect, Renewable and Sustainable Energy Reviews 13 (2009) 1395–1405.

Mechanism for REC scheme

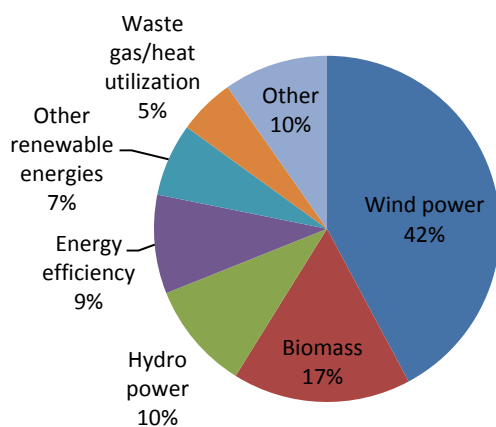


Source: Sournée et al. Renewable Energy Certificate Mechanism in India.

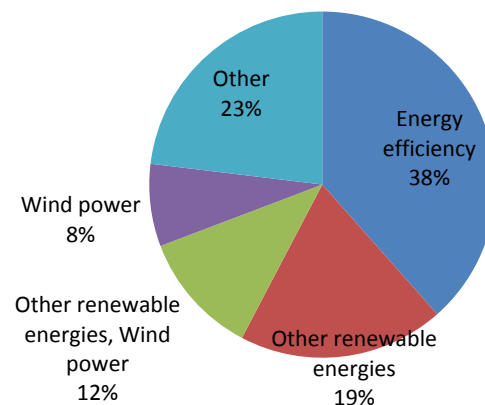
(2) The Clean Development Mechanism (CDM)

CDM Projects and PoAs status

Status	Number of Projects	Number of PoAs
Registered	1,439	25
At or after the validation stage	674	18



CDM projects



PoAs

Registered projects and PoAs by type

Source: IGES, IGES CDM Project Database (as of 30 October 2013), IGES CDM Programmes of Activities Database (as of 29 November 2013) <http://www.iges.or.jp/en/climate-energy/mm/publication.html#03>

Grid emission factor

(t-CO₂/MWh)

Regional grid	2011-2012	
	OM	BM
Integrated Northern, Eastern, Western and North-Eastern regional grids (NEWNE)	0.98	0.92
Southern grid	0.96	0.85

Source: The Central Electricity Authority, Ministry of Power. http://www.cea.nic.in/reports/planning/cdm_co2/user_guide_ver8.pdf.

Contact Information: DNA in India

National CDM Authority (NCDMA)

Ministry of Environment and Forests, Government of India

Core IV B, 2nd floor, India Habitat Centre, Lodhi Road, New Delhi, India 110 003

Phone: +91 11 2464 2176 Fax: +91 11 2464

Web: <http://www.cdmindia.in>

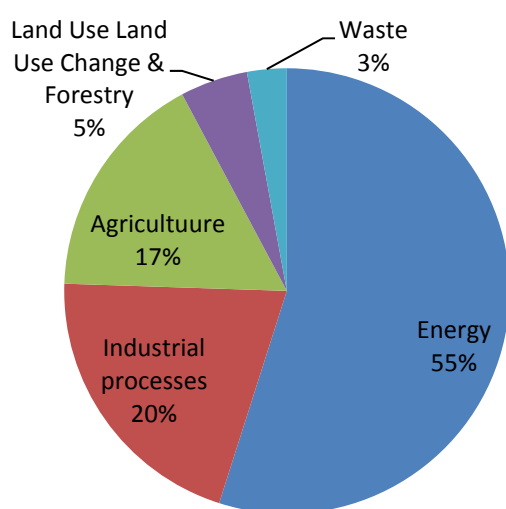
Relevant information

(1) National GHG Inventories

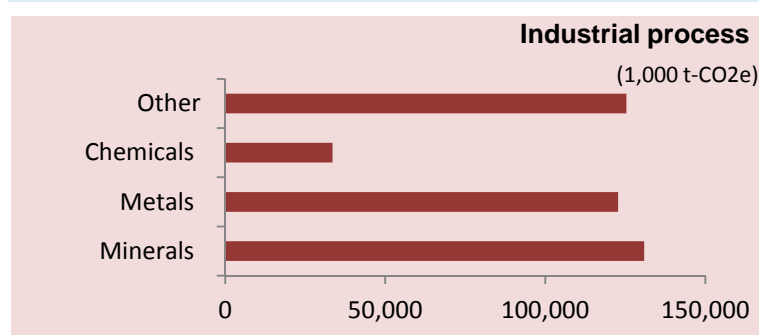
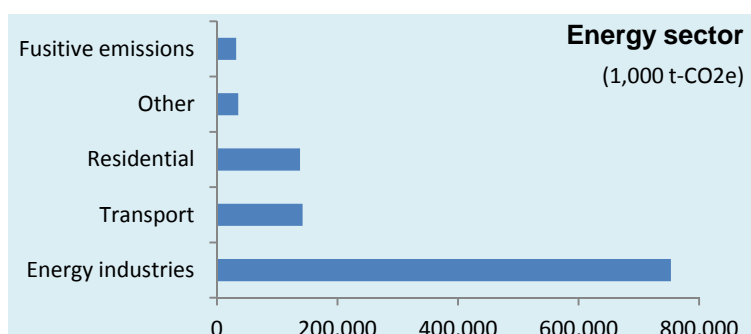
Year 2007

(1,000 t-CO₂e)

Total emissions and removals	1,727,706
Emissions	2,003,064
Removals	-275,358



GHG Emissions by sector



Source: India: Greenhouse Gas Emissions 2007 http://moef.nic.in/downloads/public-information/Report_INCCA.pdf

Submission of National Communications

First	22 June 2004
Second	4 May 2012

Source: UNFCCC. Non-Annex I national communications. http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php

(2) Nationally Appropriate Mitigation Actions (NAMAs)

Status of NAMAs Submission

Publication Date	28 January 2010
Emission Reduction Goal	Reduce GHG emissions intensity of its GDP by 20-25% by 2020
Base year	2005

Source: GOI (2010) http://unfccc.int/files/meetings/cop_15/copenhagen_accord/application/pdf/indiacphaccord_app2.pdf

Estimated benefits and costs of some of the mitigation actions (NAMAs)

Action	Brief Description	Estimated Benefit (Mt-CO ₂ /yr in 2020)	Estimated Additional cost (\$ billion/yr)
National Solar Mission	22,000 MW of solar by 2022 (600 MW constructed in 2010)	31	5.1
Nuclear Energy	20,000 MW by 2020	99	8.2
Renewable Energy	72,000 MW by 2022	104	4.3
Green India Mission	20 Mn Ha to be afforested/eco-restored	43	1.0
Total		~ 275	~ 19

Source: India's Development Needs and Mitigation Actions, UNFCCC Workshop on NA I Mitigation Actions, 4th April 2011 Bangkok http://unfccc.int/files/meetings/ad_hoc_working_groups/lca/application/pdf/india_ws.pdf



Market Mechanisms Country Fact Sheet: Indonesia

National Climate Change Policy in Indonesia

Historical Background of Climate Change Policies

Year	Relevant policies and decrees
2007	<ul style="list-style-type: none">National action plan addressing climate change
2008	<ul style="list-style-type: none">Presidential Regulation of the Republic of Indonesia No.46 year 2008 on National Council for Climate Change
2010	<ul style="list-style-type: none">Submission of Nationally Appropriate Mitigation Actions to UNFCCC secretariatIndonesia climate change sectoral roadmap2010-2014 National Medium-Term Development Plan (RPJMN: 2010-2014)
2011	<ul style="list-style-type: none">Presidential Regulation of the Republic of Indonesia No.61 year 2011 on the National Action Plan for Greenhouse Gas Emission Reductions (RAN-GRK)
2012	<ul style="list-style-type: none">Guideline for implementing GHG emission reduction action plan

(1) The National Action Plan for Greenhouse Gas Emission Reduction (RAN-GRK)

(Published in 2011)

Objectives

Implementation of various activities both directly and indirectly to reduce greenhouse gas emissions in accordance with the regional development targets

Target sectors

Water, Marine and Fisheries, Agriculture, Health, Transportation, Forestry, Industry, Waste

Source: The National Action Plan for Greenhouse Gas Emissions Reduction, Presidential Regulation of The Republic of Indonesia No.61 Year 2011

Core activities

Sector	Core activities in national action plan for GHG reductions
Agriculture	<p><u>Policies taken to support the RAN-GRK:</u></p> <ol style="list-style-type: none"> 1. Stabilisation of the national food security and the enhancement of agricultural products with low GHG emissions 2. Enhancement of the irrigation system and function and maintenance <p><u>Strategies:</u></p> <ol style="list-style-type: none"> 1. Optimise land and water resources 2. Apply land management and agricultural farming technologies that have lowest GHG emissions and can absorb CO₂ optimally 3. Stabilise the water level and arrange for uninterrupted circulation of water in irrigation network
Forestry and peat land	<p><u>Policies taken to support the RAN-GRK:</u></p> <ol style="list-style-type: none"> 1. Reduction of GHG and at the same time promoting a safe environment, preventing disasters, absorbing workforce and increasing state's and community's revenues 2. Management of marsh water system network in marsh area 3. Maintenance of marsh reclamation <p><u>Strategies:</u></p> <ol style="list-style-type: none"> 1. Suppress the rate of forest deforestation and degradation to reduce GHG emissions 2. Increase planting to increase GHGs absorption 3. Increase the efforts to secure forest areas from fire and illegal loggings and apply a sustainable forest management 4. Enhancement of productivity and efficient production of agriculture on peat lands with lowest emission and absorb optimally 5. Optimise land and water resources without deforestation 6. Apply land management and agriculture farming technologies that have lowest GHG emissions and can absorb CO₂ optimally
Energy and transportation	<p><u>Policies taken to support the RAN-GRK:</u></p> <ol style="list-style-type: none"> 1. Increased energy saving 2. The use of cleaner fuels 3. Enhancement of new and renewable energy utilisation 4. Utilisation of clean technologies for both power generation and transportation equipment 5. Development of a low emission, sustainable and environmentally friendly national mass transport <p><u>Strategies:</u></p> <ol style="list-style-type: none"> 1. Conserve the final energy both through the application of cleaner and more efficient technologies and through reduction in the consumption of non-renewable energy 2. Encourage the use of new and renewable energy in small and medium scales 3. Reduce the travel needs, particularly in city areas, through land use management, reduce travel activities and unnecessary distances 4. Shift from using private vehicles to low-carbon transportation pattern, such as non-motorized, public, or water transportation facilities 5. Improve energy efficiency and carbon release reduction in motorized vehicles in transportation facilities
Industrial sector	<p><u>Policies taken to support the RAN-GRK:</u></p> <ol style="list-style-type: none"> 1. Increase in Industrial growth by optimising the use of energy <p><u>Strategies:</u></p> <ol style="list-style-type: none"> 1. Conduct an energy audit especially on energy-intensive industries 2. Provide incentives in energy efficient programs
Waste management	<p><u>Policies taken to support the RAN-GRK:</u></p> <ol style="list-style-type: none"> 1. Enhancing domestic solid waste and waste water management <p><u>Strategies:</u></p> <ol style="list-style-type: none"> 1. Enhancement of institutional capacity and regional regulations 2. Enhancement of waste water management in urban 3. Reduction of the heaps of waste through 3R 4. Improvement of the waste management process at the Final Treatment Facility (FTF) 5. Improvement/ construction/ rehabilitation of the FTF 6. Utilisation of waste/ solid waste into environmentally friendly energy products

Market Mechanism Instruments

(1) Domestic market mechanism

Nusantara Carbon Scheme (NCS)

Nusantara Carbon Scheme is an Indonesian emission reduction certification scheme (<http://skn.dnpi.go.id/en/>) that facilitates the voluntary carbon trading in Indonesia. Every units of carbon credit from this scheme are real and permanent emission reductions coming from verified projects that contributes to Indonesian sustainable development.

NCS would cover mitigation projects which are normally not feasible to enter CDM e.g. micro projects (<2MW, <10 GWh/y, <10,000 tCO₂/y) and community - based forestry/ agriculture projects

For each certified emissions reductions, NCS will issue carbon units, called Nusantara Carbon Unit (NCU). Each NCU is equivalent to one tonne of carbon dioxide. NCUs can be used to offset GHG emissions of individuals or organisations in Indonesia.

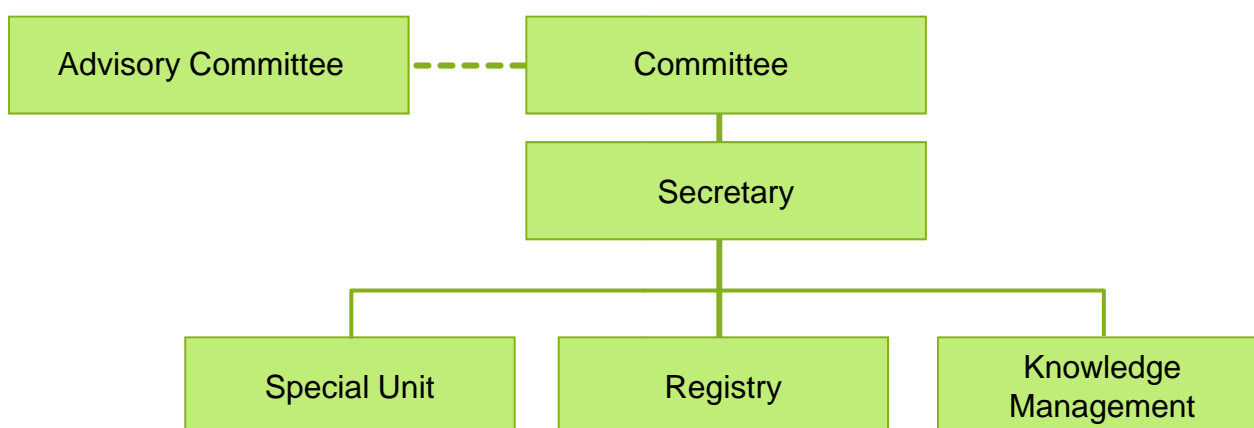
NCS allows GHG emissions reduction from activity types as below:

- Production and utilisation of renewable energy;
- Energy efficiency and conservation;
- Efficiency improvement or modification of industrial process;
- Sustainable management of waste;
- Afforestation/ Reforestation;
- Reducing Emission from Forest Degradation and Deforestation (REDD); and
- Sustainable agriculture.

The methodologies (biomass , energy efficiency, hydro power, cook stove, afforestation and reforestation and compost) and other guidelines for monitoring etc. are still under development through the focus group discussion with technical experts and relevant stakeholders.

(<http://skn.dnpi.go.id/en/fgd-1-pembahasan-metodologi-skn/>)

Institutional framework of Nusantara Carbon Scheme (Under preparation)



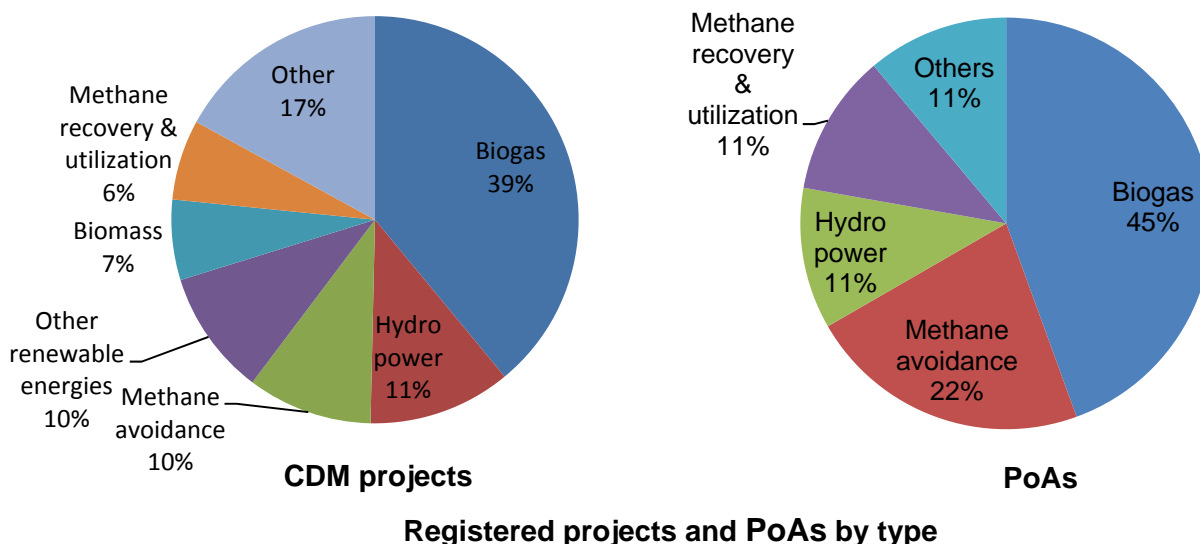
- Committee serves as the body for decision-making including strategic decisions in the development of Nusantara Carbon Scheme, determining the feasibility of the project, publishing NCU, adoption of methodologies, and others. Committee may be assisted by an advisory committee as necessary.
- Advisory committee and committee consist of representatives of stakeholders.
- The secretariat shall carry out the operation of NCS and provide recommendations to the committee related to NCS operations in terms of the technical and administrative aspects.

Source: Nusantara Carbon Scheme website http://skn.dnpi.go.id/wp-content/uploads/2012/08/SKN_Ketentuan-Umum_ver.-0.0.pdf

(2) The Clean Development Mechanism (CDM)

CDM projects and PoAs status

Project Status	Number of projects	Number of PoAs
Registered	141	9
At or after the validation stage	27	8



Source: IGES, IGES CDM Project Database (as of 30 October 2013), IGES CDM Programmes of Activities Database (as of 29 November 2013)
<http://www.iges.or.jp/en/climate-energy/mm/publication.html#03>

Grid emission factor

Grid name	2010 Emission Factors (t-CO ₂ / MWh)	
	Ex-ante	Ex-post
Java-Madura-Bali (Jamali)	0.741	0.73
Sumatra	0.748	0.749
West Kalimantan	0.748	0.733
South and Central Kalimantan	1.003	0.96
East Kalimantan	0.82	0.861
Kotamobagu Minahasa	0.319	0.332
South Sulawesi, West Sulawesi	0.601	0.605
Batam	0.568	0.549

Source: National Committee on Clean Development Mechanism Indonesian DNA for CDM
<http://pasarkarbon.dnpi.go.id/web/index.php/dnacdm/read/23/pembaruan-faktor-emisi-sistem-interkoneksi-tenaga-listrik-2011.html>

Contact Information: DNA in Indonesia

National Council on Climate Change (NCCC)* – Indonesia
 BUMN Building 18th floor, Jl. Merdeka Selatan kav. 13, Jakarta Pusat
 Phone: +62-21-3511400 Fax: +62-21-3511403

*Indonesian: Dewan Nasional Perubahan Iklim (DNPI)

(3) The Joint Crediting Mechanism (JCM)

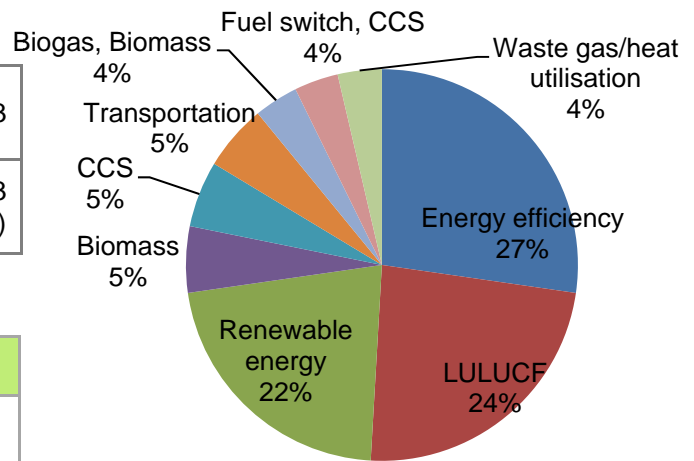
JCM negotiation status

Date of agreement on the JCM	Aug 26 2013
1st Joint Committee meeting	Oct 16-17 2013 (in Jakarta)

Documents

Type	Title
General	Bilateral Cooperation on the Joint Crediting Mechanism for the Low Carbon Growth Partnership between Japan and the Republic of Indonesia

Source: New market mechanism platform
<http://www.mmechanisms.org/e/index.html>



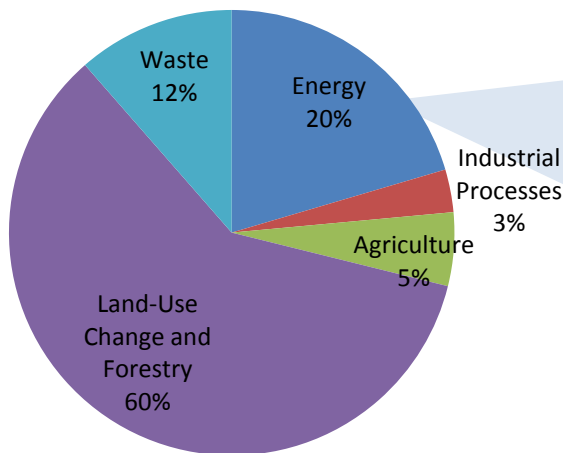
Total 58 studies
JCM feasible studies (2010 - 2013)

Source:
 Global Environment Center Foundation
http://gec.jp/main.nsf/en/Activities-Climate_Change_Mitigation-Top
 Ministry of Economy, Trade and Industry
http://www.meti.go.jp/policy/energy_environment/global_warming/global.html
 New Energy and Industrial Technology Development Organization
<http://www.nedo.go.jp/english/index.html>

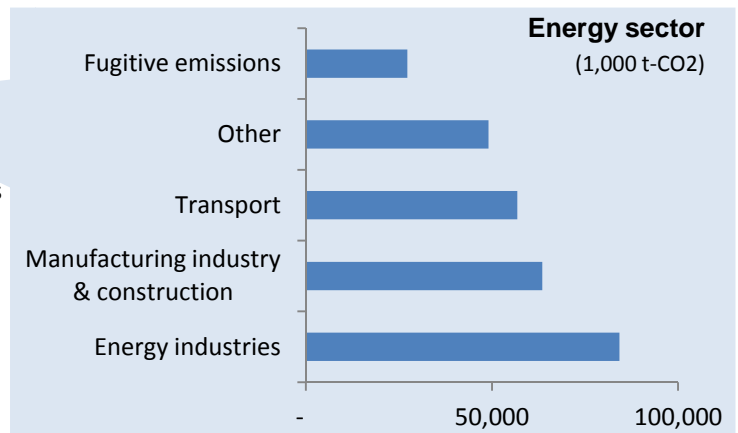
Relevant Information

(1) National GHG Inventories

Year 2005	(1,000 t-CO _{2e})
Total emissions and removals	1,375,588
Emissions	1,672,382
Removals	-296,794



GHG Emissions by sector



Source: UNFCCC. http://unfccc.int/ghg_data/ghg_data_unfccc/ghg_profiles/items/4626.php
 Indonesia Second National Communication. <http://unfccc.int/resource/docs/natc/indonc2.pdf>

Submission of National Communications

First	27 October 1999
Second	14 January 2011 (Updated: 19 January 2012)

Source: UNFCCC http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php

(2) Nationally Appropriate Mitigation Actions (NAMAs)

Status of NAMAs Submission

Publication Date	19 January 2010
GHG Emission Reduction Goal	26% reduction from Business As Usual scenario

Contents of NAMAs

- (a) Sustainable peat land management;
- (b) A reduction in the rate of deforestation and land degradation;
- (c) The development of carbon sequestration projects in forestry and agriculture;
- (d) The promotion of energy efficiency;
- (e) The development of alternative and renewable energy sources;
- (f) A reduction in solid and liquid waste;

Indonesia also communicated that its national action plan, aimed at achieving the aforementioned emissions reduction, would be equipped with a measurable, reportable and verifiable system in order to ensure that each action receives the necessary level of funding.

Source: UNFCCC (2013) Compilation of information on nationally appropriate mitigation actions to be implemented by developing country Parties



Market Mechanisms Country Fact Sheet: Republic of Korea

National Climate Change Policy

(1) Framework Act on Low-Carbon Green (LCGG)

Act No. 9931, 13 January 2010
Amendment Act No. 10599, 14 April 2011

Background

- Lay institutional foundation for the “Low-carbon Green Growth” national vision
- Integrate 3 existing of draft laws; Energy act, Framework act on sustainable development, Bill on countermeasures against Climate Change

Objective

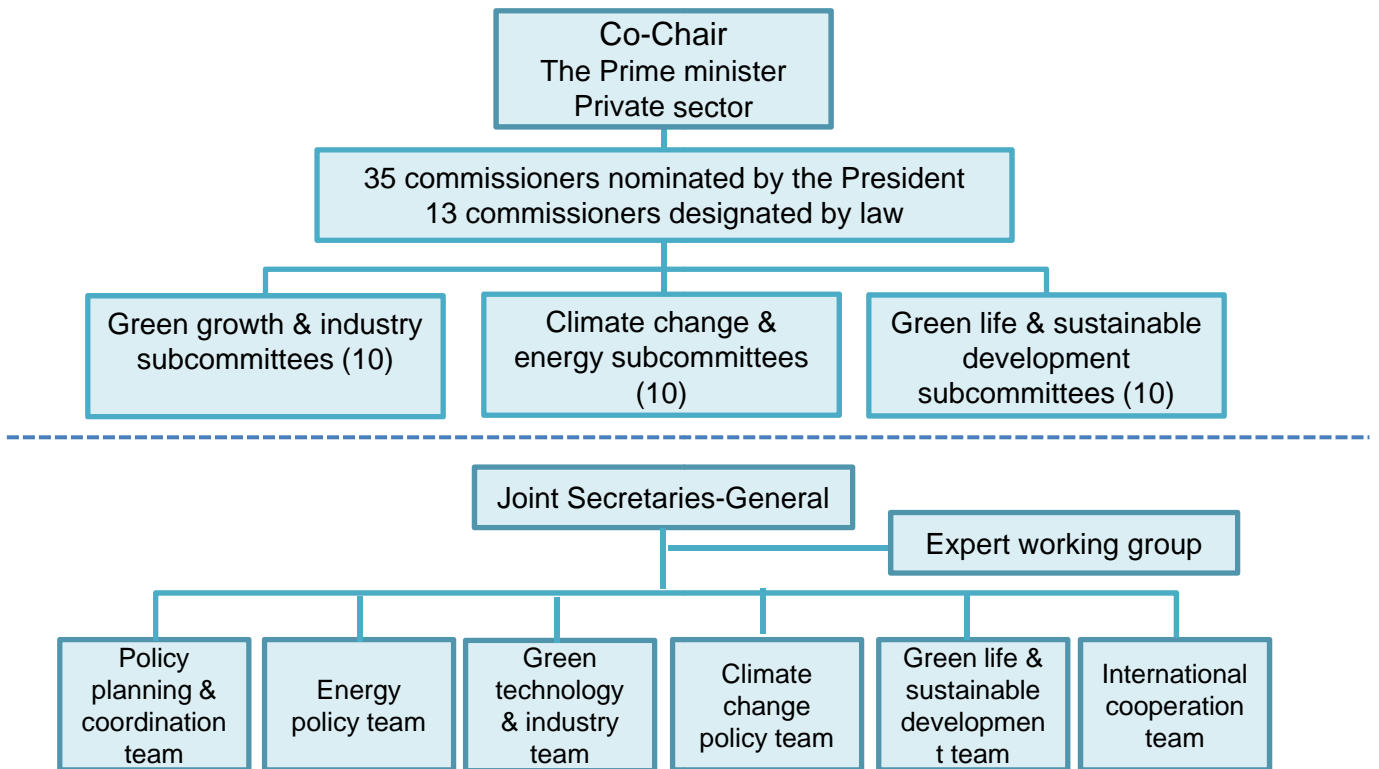
- To focus on promoting green technology/industry as new growth engines
- To organically connect and harmonize climate change and energy measures
- To suggest the direction of environmentally friendly taxation
- To secure statistical data such as GHG emissions and energy production and establish the foundation for promoting green management by corporations
- To introduce the Target Management System (TMS) for GHG mitigation and energy saving

Measures to control GHG emissions

- Mid-term GHG emission reduction target: 30% of BAU by 2020
- GHG and Energy Target Management System (TMS)
 - * Emission Trade System (ETS) through a new separate law
- Comprehensive National GHG Information System
- Control of automobiles' GHG emission and fuel efficiency
- Vitalization of green life style

Source: Ministry of Environment, Republic of Korea (MOE) http://www.iges.or.jp/jp/cdm/pdf/regional/101104/m_lee.pdf
Korea Environment Corporation (KECO)

Presidential committee on green growth



Source: Republic of Korea's 3rd National Communication to UNFCCC <http://unfccc.int/resource/docs/natc/kornc3.pdf>

(2) Policies and measures for GHG reduction

Sector		Strategy	Policies and measures
Energy and industrial sector	Demand	Enhanced energy demand management in the industrial sector	<ul style="list-style-type: none"> • Voluntary agreement • Energy audit system • Consultation on energy use plan • Investment support for energy efficiency facilities • Energy Service Company (ESCO) business expansion • Cap on energy consumption for government and public sectors
	Supply	Expansion of new & renewable and clean energy supply	<ul style="list-style-type: none"> • Program for new & renewable energy promotion • Expansion of integrated energy supply system • Stable supply of natural gas • Maintenance of appropriate level of nuclear power generation • Expansion of biodiesel supply
	Efficiency	Expansion of high-efficiency equipment supply	<ul style="list-style-type: none"> • Energy efficiency standard & labeling program • Enforcement of e-standby program • High-efficiency equipment certification
	Reduction	Promoting early action on GHG reduction	<ul style="list-style-type: none"> • Korea voluntary emission reduction registration program • Industrial ad-hoc working groups for addressing climate change
Buildings		Intensification of building design standards	<ul style="list-style-type: none"> • Building code for envelope insulation & energy-efficient design • Energy efficiency labeling program for buildings • Green building certification program • Green building activation plan

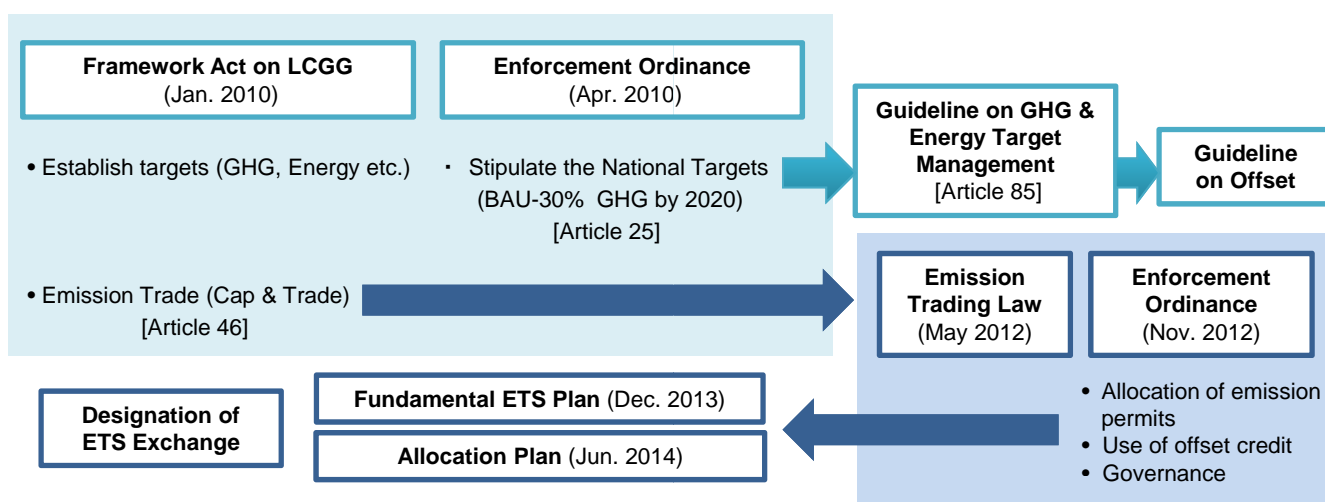
Policies & measures for GHG reduction (cont.)

Sector	Strategy	Policies and measures
Transport	Enhanced management of transport demands and efficient traffic system	<ul style="list-style-type: none"> •Low carbon smart transit system •Green public transport
	Revitalization of low emission vehicles	<ul style="list-style-type: none"> •Foundation for distribution of electric vehicles
	GHG & energy policy for vehicles	<ul style="list-style-type: none"> •Implementation of production and distribution of high-efficiency vehicles
	Establishment of low carbon distribution system	<ul style="list-style-type: none"> •Low cost, high efficiency green distribution system
Agricultural & livestock	Improvement of agro-dairy farming methods	<ul style="list-style-type: none"> •Reduction of CH₄ emissions from paddy fields •Reduction in N₂O emissions in paddy field and upland •Improvement of ruminant enteric fermentation •Utilization of livestock manure as resources
Forestry	Protection and expansion of forest carbon sinks	<ul style="list-style-type: none"> •Maintenance and enhancement of carbon sequestration potential •Prevention of deforestation •Afforestation/reforestation
	Implementation of forest carbon offset projects	<ul style="list-style-type: none"> •Introduction of forest carbon offset program
	Promotion of use of wood bio-energy	<ul style="list-style-type: none"> •Promotion of use of wood bio-energy
Waste	Minimization of waste occurrences and resource recovery	<ul style="list-style-type: none"> •Reduction of waste •Expanding reuse and recycling of waste •Utilization of waste resources as energy

Source: Republic of Korea's 3rd National Communication to UNFCCC <http://unfccc.int/resource/docs/natc/korc3.pdf>

Market Mechanisms Instruments

(1) Domestic market mechanism



Source: Korea Environment Corporation (KECO)

Press Release on Enforcement Ordinance of ETS Law, Presidential Committee on Green Growth (PCGG), 13 Nov. 2012

<http://www.greengrowth.go.kr/?p=57847&cat=6>

Target Management System (TMS) (started from 2012)

Emission Trading Scheme (ETS) (starts from 2015)

Coverage

- Installation emitting over 25,000 t-CO₂/y in 2012
- Extending TMS coverage

- Installation emitting over 25,000 t-CO₂/y or entities emitting over 125,000t-CO₂/y
- Voluntary participants via opt-in procedure

Setting Targets

- Keep consistency with the national mid-term target
- Based on average of 3 years emission records, with adjustments through negotiations between the government and covered entities

Allocation of emission permits

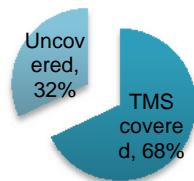
- Decrease the percentage of free allocation gradually

1 st phase (2015-2017)	2 nd phase (2018-2020)	3 rd phase (2021-2025)
100% free allocation	97% free allocation	Free allocation of 90% or below *

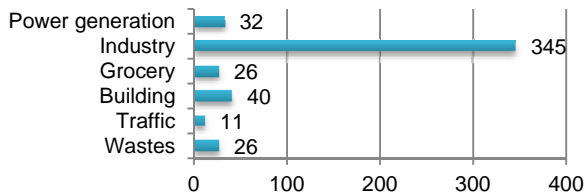
- *Detail will be determined by Fundamental ETS Plan
- 100% free allocation to trade-exposed carbon-intensive sectors which meet the requirements below

Type	Exposure to trade	Exposure to carbon intensity
1	More than 10%	More than 5%
2	More than 30%	-
3	-	More than 30%

Coverage of GHG emissions



Covered 480 companies (2013)



Performance Evaluation

- Implementation plans submitted for government's review each year
- MRV – GHG Inventory & Research Center, Third Party verification

Offset (Domestic/International)

Use of international offset credits

1 st & 2 nd phase	3 rd phase
international offset credits cannot be used	Limited use of international offset credits
	✓ To meet up to 10% of a liable entities surrender obligations
	✓ Volume must not exceed the number of domestic offset credits used.

- The standards of offset credits to be used will be noticed later

Transaction Infrastructure

- Designate or establish Trading Platform
- Registry for unit accounting, trading and emission inventory
- Strict MRV system adapted from TMS infrastructure

Penalty

- Administrative and financial penalty on non-compliance
- No more than 10 million KRW (9,394 USD)

- Up to 3 times average market price in the previous year
- No more than 100 thousand KRW (94 USD)/t-CO₂

Source: Korea Environment Institute

Press Release on 2013 GHG to be controlled, MOE, 16 Oct.2012 http://eng.me.go.kr/board.do?method=view&docSeq=10844&bbsCode=new_news

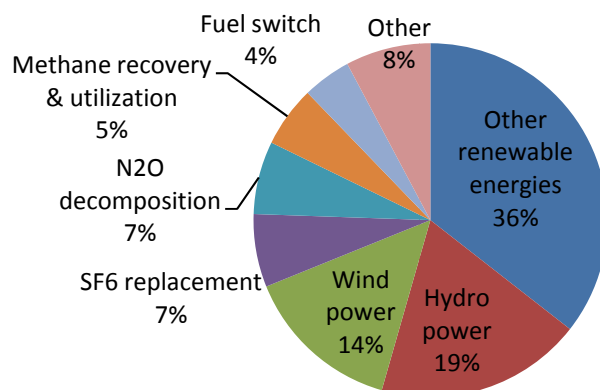
Mini Guidebook for TMS Covered Entities, PCGG, 28 Nov.2011 <http://www.greengrowth.go.kr/?p=42219>

Press Release on Enforcement Ordinance of ETS Law, PCGG, 13 Nov.2012 <http://www.greengrowth.go.kr/?p=57847&cat=6>

(2) The Clean Development Mechanism (CDM)

CDM projects and PoAs status

Project Status	Number of projects	PoA
Registered	90	6
At or after the validation stage	5	8



Registered projects by type

Source: IGES, IGES CDM Project Database (as of 30 October 2013) <http://www.iges.or.jp/en/climate-energy/mm/publication.html#03>

List of registered PoAs

Title	Type of Project	Annual emission reduction (t-CO ₂ /yr)	CME
Programme of Activities to introduce renewable energy system into collective housing, Republic of Korea	Other renewable energies	1,326	Korea Land & Housing Corporation
The programme to introduce renewable energy system into Seoul	Other renewable energies	20	Seoul Metropolitan Government
Shinsung Solar Energy Grid Connected Photovoltaic Power Generation PoA	Other renewable energies	78	Shinsung Solar Energy Co. Ltd.
SH Corporation Solar photovoltaic housing complex programme in Republic of Korea	Other renewable energies	1,417	SH Corporation (public entity)
The programme to introduce renewable energy system into Jeju Island	Hydro power, Other renewable energies, Wind power	863	Jeju Special Self-Governing Province
The programme to promote efficient lightings in local areas	Energy efficiency	51	Korea Energy Management Corporation

Source: IGES, IGES CDM Programmes of Activities Database (as of 29 November 2013) <http://www.iges.or.jp/en/climate-energy/mm/publication.html#03>

Contact information: DNA in Republic of Korea

The CDM Review Committee, Prime Minister's Office
 Government Complex Building #1009 77-6, Sejong-ro, Jongro-gu Seoul, Republic of Korea
 Phone: (82-2) 2100 2369 Fax: (82-2) 2100 2379
 E-mail Dr. KiHyup Hong emchkh@pmo.go.kr, emchkh@korea.kr

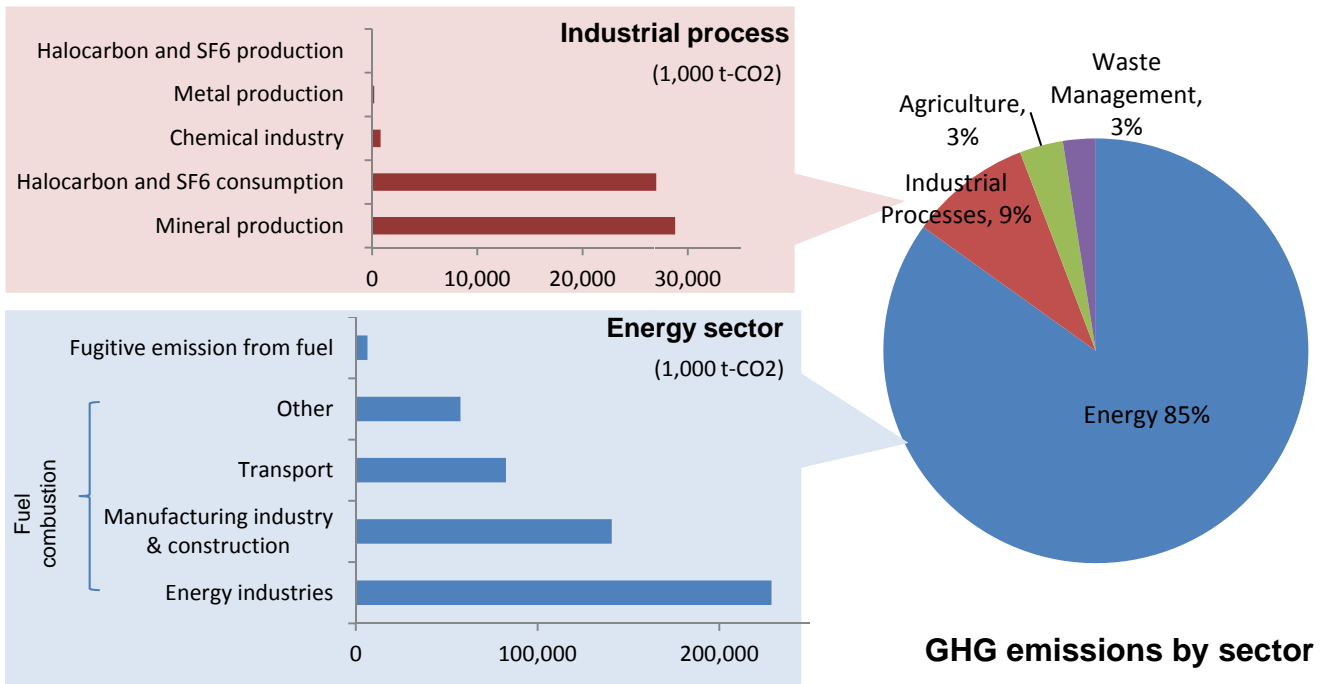
Relevant information

(1) National GHG Inventories

Year 2009

(1,000 t-CO₂e)

Total emissions and removals	564,700
Emissions	607,600
Removals	-42,900



Source: Republic of Korea's 3rd National Communication to UNFCCC <http://unfccc.int/resource/docs/natc/kornrc3.pdf>

Submission of National Communication

First	12 February 1998
Second	1 December 2003
Third	20 March 2012

Source: UNFCCC http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php

(2) Nationally Appropriate Mitigation Actions (NAMAs)

Status of NAMAs Submission

Publication Date	25 January 2010
Emission Reduction Goal	30% reduction from the business as usual emissions by 2020

Source: UNFCCC http://unfccc.int/files/meetings/cop_15/copenhagen_accord/application/pdf/koreacphaccord_app2.pdf



Market Mechanisms Country Fact Sheet : Lao People's Democratic Republic

National Climate Change Policy

(1) Strategy on Climate Change of the Lao PDR

(Adopted in 2010)

Objective

To secure a future where the Lao PDR is capable of mitigating and adapting to changing climatic conditions in a way that promotes sustainable economic development, reduces poverty, protects public health and safety, enhances the quality of Lao PDR's natural environment, and advances the quality of life for all Lao people.

Strategic priorities for mitigation

Sector / Actions	Scope of actions
Agriculture & Food security	<ul style="list-style-type: none"> Reducing methane emissions from rice paddies, enteric fermentation and livestock manure Reducing methane emissions from enteric fermentation Reducing emissions from livestock manure Promoting new technology transfers
Forestry & Land use change	<ul style="list-style-type: none"> Reducing "slash and burn" agriculture, off-site burning and forest fires Reducing off-site burning Integrating forest management Integrating forest management including effective mapping and planning Pursuing carbon market opportunities
Energy & Transport	<ul style="list-style-type: none"> Promoting 90% of electrification rate by 2020. Accelerating the development of renewable energy (solar, wind and hydro including mini-hydro) and cleaner energy (coal-bed methane and coalmine methane) Introducing energy-efficient lighting, appliances and energy-efficient buildings Promoting the use of alternate energy operated motor vehicles and pursuing environmental sustainable transport strategy Generating public awareness on energy saving by implementing initiatives such as car free day, marking Earth Day and World Environment Day Seeking the opportunities under CDM or other flexible, pragmatic financing mechanisms
Industry	<ul style="list-style-type: none"> Improving energy efficiency during the production process Reducing wood waste through improvement of furniture manufacturing techniques and methods Promoting the use of biomass including agricultural residues
Urban Development	<ul style="list-style-type: none"> Applying the 3Rs (reduces, reuse and recycle), composting and landfill gas captured Upgrading solid waste collection services and management of sewage sludge Building recycling facilities Composting organic contents to manufacture organic fertilizers Promoting environmental sustainable urban development Encourage the participation of the private sector and international partners in GHG emission reduction from wastes under the CDM and other financing mechanisms

Source: National Environmental Committee (2010) Strategy on Climate Change of the Lao PDR.

Market Mechanism Instruments

(1) The Clean Development Mechanism (CDM)

CDM projects and PoAs status

Project status	Number of Projects	Number of PoAs
Registered	7	0
At or after the validation stage	4	0

List of registered CDM projects

Name of CDM Project Activity	Type of Project	Emission reductions (tCO ₂ /y)	Project Participants (Host Country)
Nam Sim Hydropower Project, Huapanh Province, Lao PDR	Hydro power	17,983	Nam Sim Power Company Ltd.
Nam Ngum 5 Hydropower Project	Hydro power	248,339	Nam Ngum 5 Power Company Ltd.
TBEC LIG Biogas Project	Biogas	37,096	TBEC (Lao) Co., Ltd. ; Carbon Bridge Pte Ltd.
Xeset II Hydropower Project	Hydro power	155,881	Electricite Du Laos
Nam Lik 1-2 Hydropower Project	Hydro power	207,377	Nam Lik 1-2 Power Company Ltd.
Xekaman 3 Hydropower Project, Lao PDR	Hydro power	499,155	Xekaman 3 Power Company Ltd.
Energy Efficiency Improvement Project At A Beer Brewery In Lao PDR	Energy efficiency	3,335	Lao Brewery Co., Ltd.

Source: IGES CDM Project Database (as of 30 October 2013) <http://www.iges.or.jp/en/cdm/report.html>

Contact Information: DNA in Lao People's Democratic Republic

Ministry of Natural Resources and Environment (MONRE) P.O. Box 7864 Ban Sisavad, Vientiane, Lao PDR

Tel: (856-21) 218712, 265017 Fax: (856-21) 218712, 265017 Email: laocdm.dna@gmail.com

(2) The Joint Crediting Mechanism (JCM)

JCM negotiation status

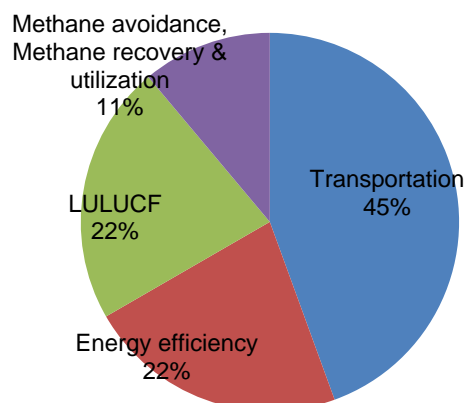
Date of agreement on the JCM	August 7 2013
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Document

Type	Title
General	Bilateral cooperation on the Joint Crediting Mechanism for the low carbon growth partnership between Japan and the Lao people's democratic republic

Source: New market mechanism platform
<http://www.mmechanisms.org/e/index.html>

JCM feasible studies (2010 - 2013) 9 projects in total

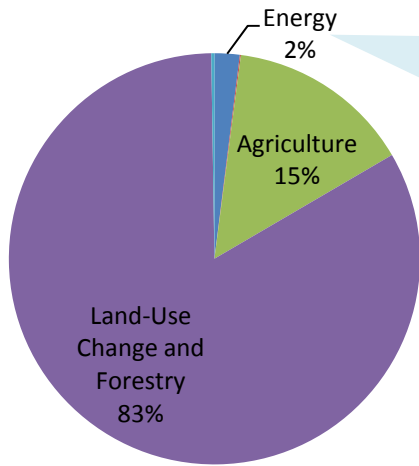


Source:
Global Environment Center Foundation
http://gec.jp/main.nsf/en/Activities-Climate_Change_Mitigation-Top
Ministry of Economy, Trade and Industry
http://www.meti.go.jp/policy/energy_environment/global_warming/global.html
New Energy and Industrial Technology Development Organization
<http://www.nedo.go.jp/english/index.html>

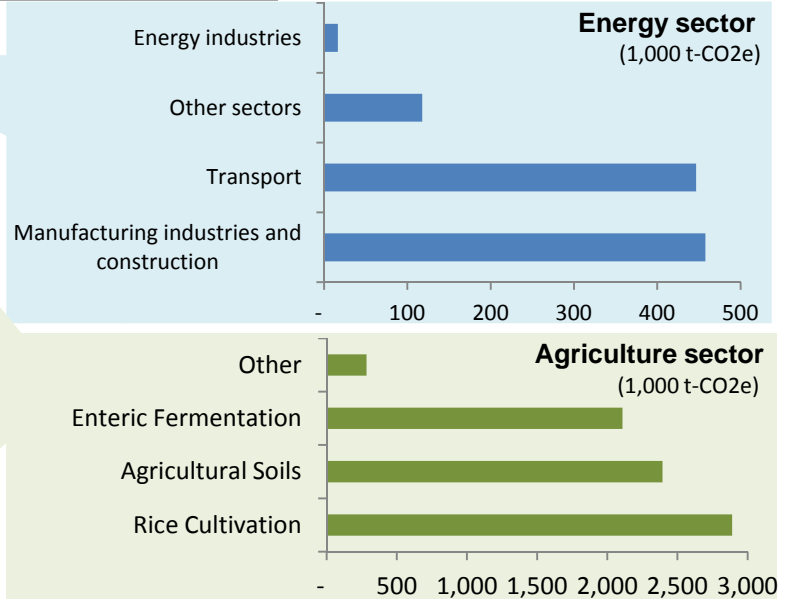
Related information

(1) National GHG Inventories

Year 2000	(1,000 t-CO ₂)
Total emissions and removals	50,817
Emissions	52,864
Removals	-2,047



GHG emissions by sector



Source: UNFCCC. Greenhouse Gas Inventory Data - Detailed data by Party. Indonesia. <http://unfccc.int/di/DetailedByParty/Event.do?event=go#>
 Lao People's Democratic Republic. Second National Communication. <http://unfccc.int/resource/docs/natc/laonc2.pdf>

Submission of National Communications

First	2 November 2000
Second	24 June 2013

Source: UNFCCC. Non-Annex I national communications. http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php



Market Mechanisms Country Fact Sheet: Mongolia

National Climate Change Policy

(1) National Action Program on Climate Change (NAPCC)

Goal

- To maintain ecological balances
- To develop social and economic resilient to climate change
- To reduce vulnerabilities and risks
- To mitigate GHG emissions through improvement of economic productivity and efficiency
- To support implementation of 'Green growth' policies

1st Phase (2011-2016)

- National mitigation and adaptation capacities will be strengthened.
- Legal framework, institutional and administrative structure will be set up.
- Community and public participation will be increased.

2nd Phase (2017-2021)

- Best available measures and activities for climate change adaptation will be implemented.
- Sustainable implementation of actions to decelerate growth of GHG emissions will begin.

Strategic Objectives

1. Set the legal environment, structure, institutional and management frameworks for addressing on climate change.
2. Ensure environmental sustainability is maintained and reduce socio-economic vulnerabilities and risks through strengthening the national climate change adaptation capacity.
3. **Mitigate GHG emissions and establish a low carbon economy through the introduction of environmentally friendly technologies and improvement in energy effectiveness and efficiency**
4. Enhance the national climate observation, research and monitoring network and strengthen employee's capacity
5. Conduct public awareness campaigns and support citizen and community participation in actions against climate change

Strategic Objective 3	Indicators of the first phase (2011-2016)	Indicators for the second phase (2017-2021)
Mitigate GHG emissions and establish a low carbon economy through the introduction of environmentally friendly technologies and improvement in energy effectiveness and efficiency	Specific fuel consumption of power plants for electricity generation will not exceed 340 gJ/ kW h.	Specific fuel consumption of power plants for electricity generation will not exceed 340 gJ/ kWh.
	Specific fuel consumption of thermal energy production will be reduced by 20 kgJ/gCal compared to 2010.	Specific fuel consumption of thermal energy production will be reduced by 30 kgJ/gCal compared to 2010.
	Renewable energy will account for 10 % of the total national energy production. Heat use will be reduced by 25 %.	Renewable energy will account for 20 % of the total national energy production. Heat use will be reduced by 30 %.

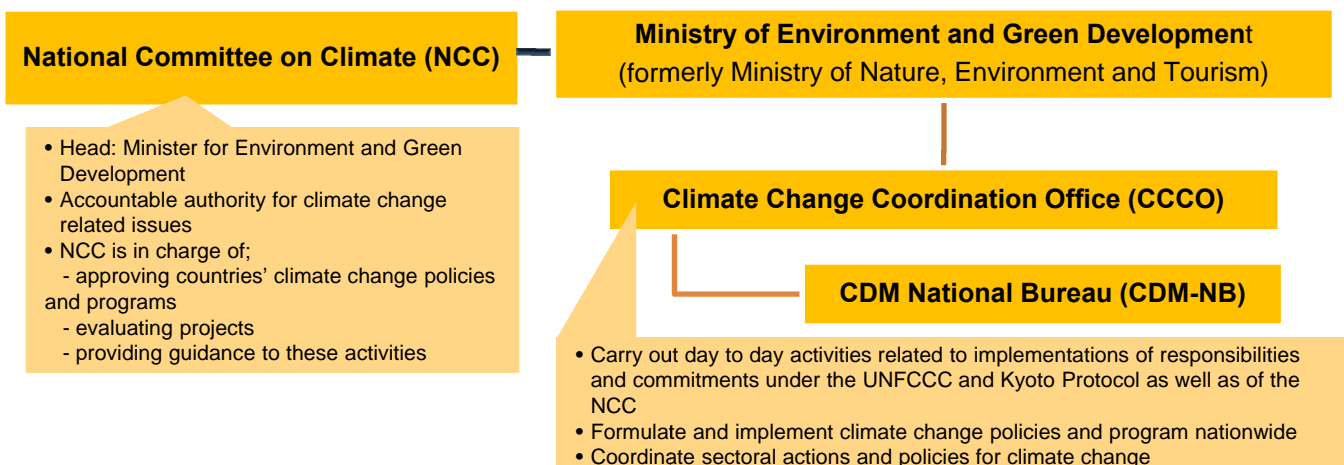
Source: Ministry of Environment and Green Development (MEGD)

(2) GHG mitigation policies and measures

Sector/subsector	Strategy	Policies and Measures
Energy Supply	Increase of renewable and other clean energy use	<ul style="list-style-type: none"> National renewable energy program Renewable energy law 100,000 solar ger program Electricity supply of remote soum centres by solar, wind and diesel hybrid systems National program of LPG use
	Energy supply efficiency improvement	<ul style="list-style-type: none"> Reduction of energy losses in transmission and distribution systems Efficiency improvement of Combined Heat and Power (CHP) Efficiency improvement of Heat-only boiler (HOB) Heat efficiency improvement in ger district area
	Promotion of clean coal technology	<ul style="list-style-type: none"> Coal program
	Study of nuclear power development	<ul style="list-style-type: none"> Nuclear energy law
Energy demand	Demand side energy conservation policy	<ul style="list-style-type: none"> Issue of energy conservation law Promotion of energy efficiency in industry and ESCO activities
	Building energy efficiency improvement	<ul style="list-style-type: none"> Implement improvements of district heating system and installation of heat meters in building Insulation improvements for existing buildings and implement new energy efficient standards for new buildings
	Improvement of energy efficiency in industry	<ul style="list-style-type: none"> Equipment efficiency improvements and good housekeeping Technology changes
Transport	Efficient management of transportation	<ul style="list-style-type: none"> Enhancement of national transportation system (railway enhancement and electrification; setting up transit logistics centers) Eco-transport strategy (efficient traffic management; expansion of public transportation; promotion of fuel efficient car)
Agriculture	Sustainable development of agriculture sector	<ul style="list-style-type: none"> Limitation of the number of livestock by increasing the productivity of animals, especially cattle.
Land use change and forestry	Land use management	<ul style="list-style-type: none"> Land degradation and desertification
	Forest conservation and afforestation	<ul style="list-style-type: none"> Protection of forest from fire Measures toward combatting harmful forest insects and disease Afforestation and measures to support natural regeneration
Waste	Waste management	<ul style="list-style-type: none"> Improvement of waste management Waste recycling

Source :Mongolia's 2nd National Communication to UNFCCC <http://unfccc.int/resource/docs/natc/mongnc2.pdf>

(3) Organisation Charts



Source: MEGD

Market Mechanism Instruments

(1) The Clean Development Mechanism (CDM)

CDM projects and PoAs status

Project Status	Number of projects	Number of PoAs
Registered	4	1
At or after the validation stage	1	0

List of CDM projects and PoAs

Name of CDM project activity /PoA	Type of Project	Annual emission reduction (t-CO ₂ /yr)	Project participants (Host Country)	Project participants (Others)
A retrofit programme for decentralised heating stations in Mongolia	Energy Efficiency	11,904	Prokon Nord Energiesysteme GmbH Mongol Zuukh XXI ltd.	
Taishir Hydropower Project in Mongolia	Hydro Power	29,600	Energy Authority, Implementing Agency of the Government of Mongolia	.
Durgun Hydropower Project in Mongolia	Hydro Power	30,400	Energy Authority, Implementing Agency of the Government of Mongolia	.
Salkhit wind Farm	Wind Power	178,778	Clean Energy LLC, Mongolia	Swedish Energy Agency
MicroEnergy Credits-Microfinance for Clean Energy Product Lines-Mongolia (PoA)	Energy efficiency	50,133	Xac bank as the implementation entity of first CPA	MicroEnergy Credits (as a CME)

Source: IGES, IGES CDM Project Database (as of 30 October 2013), IGES CDM Programmes of Activities Database (as of 1 November 2013)
<http://www.iges.or.jp/en/climate-energy/mm/publication.html#03>

Grid Emission Factor

Grid name	2010-2012 Emission Factors (t-CO ₂ / MWh)	
	OM	BM
Central grid system	1.1542	1.0566

Source: MEGD

Contact Information: DNA in Mongolia

CDM National Bureau, Climate Change Coordination Office, Ministry of Environment and Green Development (MEGD) UN street 5/2, Government building 2, Ulaanbaatar, Mongolia,
 Tel: 976-11-320402
 Email: info@cdm-mongolia.com Website : <http://www.cdm-mongolia.com/index.php?lang=en>

(2) The Joint Crediting Mechanism (JCM)

JCM negotiation status

Date of agreement on the JCM	8 January 2013
1st Joint Committee meeting	11 April 2013 (in Ulaanbaatar)

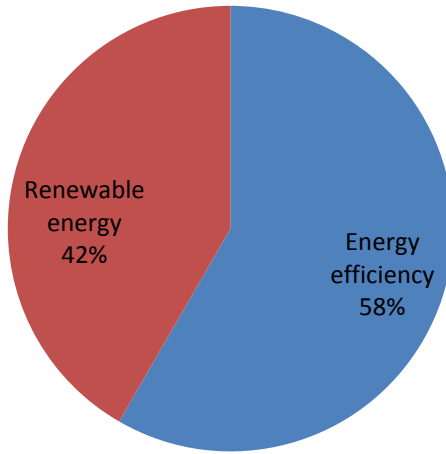
Documents

Document type	Title
General	<ul style="list-style-type: none"> Low Carbon Development Partnership between the Japanese side and the Mongolian side Rules of Implementation ver01.0 Glossary of Terms ver01.0
Project cycle	<ul style="list-style-type: none"> Project Cycle Procedure ver02.0 Guidelines for Developing Proposed Methodology ver01.0 Guidelines for Developing Project Design Document and Monitoring Report ver01.0
Third-Party Entity (TPE)	<ul style="list-style-type: none"> Guidelines for Designation as a Third-Party Entity ver01.0 Guidelines for Validation and Verification ver01.0
Joint Committee	<ul style="list-style-type: none"> Rules of Procedures for the Joint Committee ver01.0

Third Party Entities and sectoral scope

Sectoral Scope	URS Verification Private Limited	Japan Consulting Institute	Japan Quality Assurance Organization	Japan Management Association	JACO CDM., Ltd.	Deloitte Tohmatsu Evaluation and Certification Organization Co., Ltd.	Lloyd's Register Quality Assurance Ltd.
TPE's designation date	25 Sep 2013	25 Sep 2013	25 Sep 2013	25 Sep 2013	29 Oct 2013	5 Dec 2013	5 Dec 2013
1. Energy industries (renewable - / non-renewable sources)	X	X	X	X	X	X	X
2. Energy distribution		X		X		X	X
3. Energy demand			X	X	X	X	X
4. Manufacturing industries		X	X	X		X	X
5. Chemical industry		X	X			X	X
6. Construction				X		X	X
7. Transport						X	X
8. Mining/Mineral production				X		X	X
9. Metal production		X		X		X	X
10. Fugitive emissions from fuels (solid, oil and gas)		X				X	X
11. Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride			X				X
12. Solvents use						X	X
13. Waste handling and disposal	X	X	X		X	X	X
14. Afforestation and reforestation			X	X	X		
15. Agriculture						X	

Source: New market mechanism platform <http://www.mmechanisms.org/e/index.html>



Total 12 studies

JCM feasibility studies (2010-2013)

Source:

Global Environment Center Foundation http://gec.jp/main.nsf/en/Activities-Climate_Change_Mitigation-Top

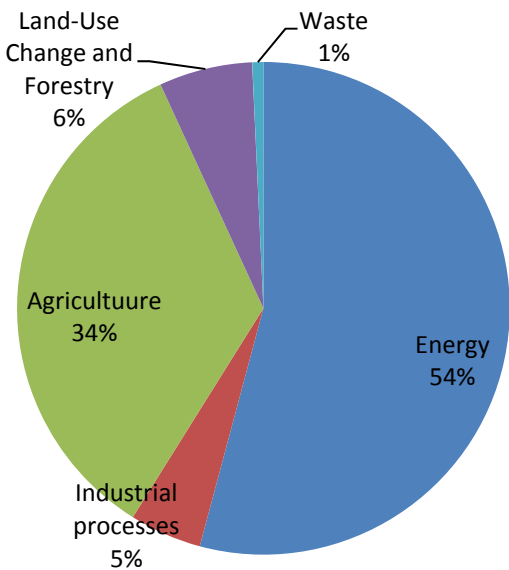
Ministry of Economy, Trade and Industry http://www.meti.go.jp/policy/energy_environment/global_warming/global.html

New Energy and Industrial Technology Development Organization <http://www.nedo.go.jp/english/index.html>

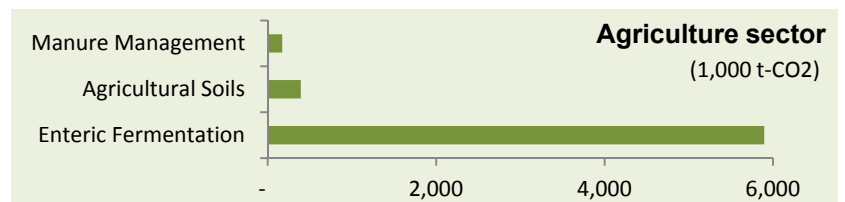
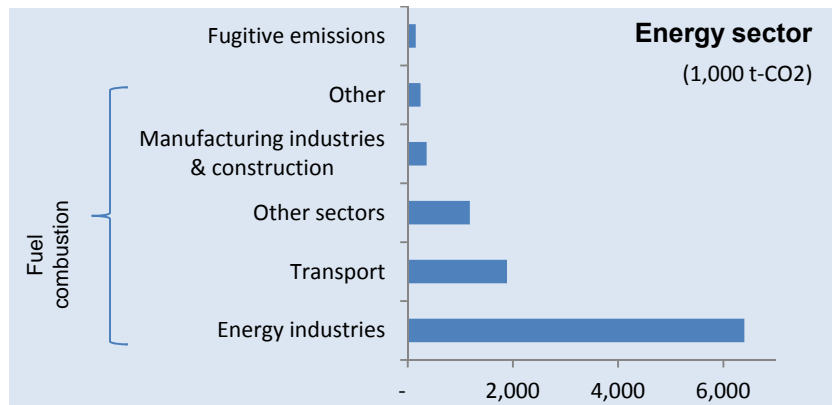
Relevant Information

(1) National GHG inventories

Year 2006	(1,000 t-CO ₂)
Emissions	18,868
Removals	-3,240
Total emissions and removals	15,628



GHG Emissions by sector



Source: Ministry of Nature, Environment and Tourism, Mongolia second national communication under the United Nations Framework Convention on Climate Change. <http://unfccc.int/resource/docs/natc/mongnc2.pdf>

Submission of National Communication

First	1 November 2001
Second	10 December 2010

Source: UNFCCC

http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php

(2) Nationally Appropriate Mitigation Actions (NAMAs)

Status of NAMAs Submission

Publication Date	28 January 2010
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Contents of NAMAs

No	Sector / Actions	Scope of Actions
1	Energy supply - Increase renewable options	
a	PV and solar heating	<ul style="list-style-type: none"> • Install large scale PV systems in Gobi region
b	Wind power generators and Wind farms	<ul style="list-style-type: none"> • Place 100-150kW wind turbine generators in provincial centers in the southern part • Implement large scale wind farm project
c	Hydro power plants	<ul style="list-style-type: none"> • Encourage the use of small and medium sized hydro developments
2	Energy supply - Improve coal quality	
a	Coal beneficiation	<ul style="list-style-type: none"> • Introduce coal washing at the biggest coal mines such as Banganuur, Shivee-Ovoo and Tavantolgoi
b	Coal briquetting	Introduce coal briquetting technology
3	Energy supply - Improve efficiency of heating boilers	
a	Improve efficiency of existing HOBs and Install boilers with new design and high efficiency	<ul style="list-style-type: none"> • Use 25MW efficient boilers x 12 • Install 1MW new boilers x 260
b	Convert hot water boilers into small capacity thermal power plants	<ul style="list-style-type: none"> • Convert steam boilers into 10MW thermal power plants x5
4	Energy supply - Improving household stoves and furnaces	
a	Change fuels for household stoves and furnaces	<ul style="list-style-type: none"> • Change raw coal used in stoves of households in cities by LPG and Coal briquette
b	Modernize existing and Implement the new design for household stoves and furnaces	<ul style="list-style-type: none"> • Modernize stoves and furnaces x 250,000
5	Energy supply - Improve CHP plants	
	<ul style="list-style-type: none"> • Improve efficiency and Reduce internal use 	<ul style="list-style-type: none"> • Improve efficiency at CHP plants • Reduce own use at CHP plants
6	Energy supply – Increase use of electricity for local heating in cities	
	Use of electricity from grid for individual households in cities	<ul style="list-style-type: none"> • In ger (traditional tent house) districts of Ulaanbaatar city

№	Sector / Actions	Scope of Actions
7	Building – Building energy efficiency improvement	
a	Improve district heating system in buildings	<ul style="list-style-type: none"> • Reduce the loss such as minimizing leakage and replacement of valves and compensators • Regulate room temperatures by residential customers
b	Install heat and hot water meters in apartments	<ul style="list-style-type: none"> • Install the meters in apartments to calculate their heating fee and price based on actual amount of heat used
c	Make Insulation improvements for existing buildings and implement new energy efficient standards for new buildings	<ul style="list-style-type: none"> • Lesson the heat loss to improve energy efficiency at houses and buildings 2-3 times higher than current
d	Improve lighting efficiency in buildings	<ul style="list-style-type: none"> • Replace current ILB to energy efficient CFL in 30% of service and commercial buildings
8	Industry – Energy efficiency improvement in industry	
a	Improve housekeeping practices	<ul style="list-style-type: none"> • Good housekeeping and energy management
b	Implement motor efficiency improvements	<ul style="list-style-type: none"> • Energy efficient motors; variable speed drives; improved operation and maintenance; correction of previous over-sizing; improved mechanical power transmission, efficiency of driven equipment
c	Introducing dry-processing in cement industry	<ul style="list-style-type: none"> • Change the wet-processing of cement to 1,000 -1,200 kcal/kg.cl. dry-processing
9	Transport	
	Use more fuel efficient vehicles	<ul style="list-style-type: none"> • Implement used vehicle import standards to promote import of fuel efficient vehicles • Implement vehicle registration tax to improve overall fuel efficiency of vehicles
10	Agriculture	
	Limit the increase of the total number of livestock by increasing the productivity of each type of animal, especially cattle	<ul style="list-style-type: none"> • Arrange a good environment of economics and infrastructure for the animal husbandry sector • Refine upon livestock breeding and service in accordance with social needs • Bring the veterinary works and service into international standards • Improve abilities if bearing risks like various change of climate, nature and ecology • Develop the goal-directed market of livestock, livestock raw materials and products and accelerate the economic circulation
11	Forestry	
a	Improve forest management	<ul style="list-style-type: none"> • Natural regeneration • Plantation forestry • Agro-forestry • Shelter belts • Bioelectricity
b	Reduce emissions from deforestation and forest degradation, improve sustainable management of forests and enhance forest carbon stocks in Mongolian forest sector	Initiate and implement a REDD projects through reforestation activities by community based forest management improvement and sustainable use of forest resources

Source: UNFCCC http://unfccc.int/meetings/cop_15/copenhagen_accord/items/5265.php

Acknowledgement

Data and information on Mongolia CDM projects for DNA approval were provided by the CDM NB-MEGD. The valuable information and comments received from the CCCO and CDM NB-MEGD for this issue of the Market Mechanism Country Fact Sheet were greatly appreciated.



Market Mechanisms Country Fact Sheet: Myanmar

National Climate Change Policy

(1) Environment-related policies

Myanmar does not have a specific policy on climate change. Environmental Conservation Law went into effect in July 2012 as the foundation of environment-related policies, which are currently being formulated. Below are the list of environment-related policies in Myanmar .

Title	The National Environment Policy of Myanmar
Objective	<ul style="list-style-type: none"> To establish sound environment policies in the utilization of water, land, forests, mineral, marine resources and other natural resource in order to conserve the environment and prevent its degradation To integrate environment and development to achieve sustainable development to give environmental protection a priority in promoting economic development
Year adopted	1994
Title	Myanmar Agenda 21
Objective	To strengthen and promote systematic and environmental management
Target sections	1) Sustainable use of natural resources ; 2) sustainable social development ; 3)sustainable economic development ; 4) sustainable institutional development
Year adopted	1997
Title	National Sustainable Development Strategies (NSDS)
Objective	<ul style="list-style-type: none"> Covers 3 main areas of Social, Economic and Environmental issues Focus national effort to achieve sustainable development
Year adopted	2009
Title	Environmental Conservation Law
Ministry in charge	Ministry of Environmental Conservation and Forestry
Year adopted	2012

(2) Organisation Chart

Myanmar Climate Change Alliance Committee
Chair: Director General of Planning and Statistics Department, Ministry of Environmental Conservation and forestry

Myanmar Climate Change Alliance Committee was formed in December 2013 with support from UN-HABITAT, European Union and UNEP. Further information is currently being sought.

28 ministries and line agencies

Source: UN-HABITAT and UNEP

Market Mechanism Instruments

(1) The Clean Development Mechanism (CDM)

List of registered CDM projects and PoAs

Name of CDM Project Activity	Type of Project	Annual ER (t-CO ₂ /yr)	Project proponent (Host Country) / CME	Status
Dapein(1) Hydropower Project in Union of Myanmar	Hydro power	709,360	Dapein(1) Hydropower Co., Ltd.	Registered
Upper Baluchaung No.2 Hydropower Project in Myanmar	Hydropower	17,559	NEO Energy Oasis Development Co., Ltd.	Under Validation
Installation of Energy Efficient Cookstoves in Myanmar (PoA)	Energy Efficiency	433,720	Core CarbonX Sols Pvt Ltd Myanmar Ceramic Society	Under Validation

Source: IGES, IGES CDM Project Database (as of 30 October 2013), IGES CDM Programmes of Activities Database (as of 29 November 2013)
<http://www.iges.or.jp/en/climate-energy/mm/publication.html#03>

Contact information : DNA in Myanmar

Ministry of Forestry, Planning & Statistics Department

Building No- 28, Nay Pyi Taw, Myanmar

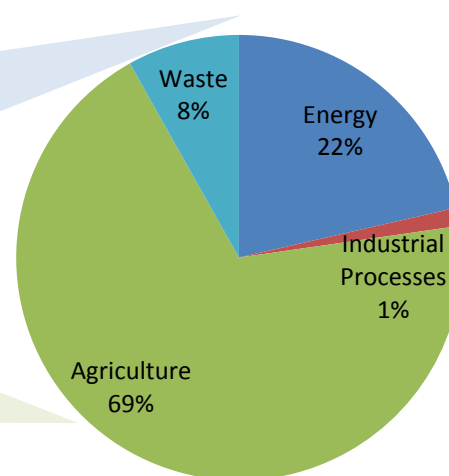
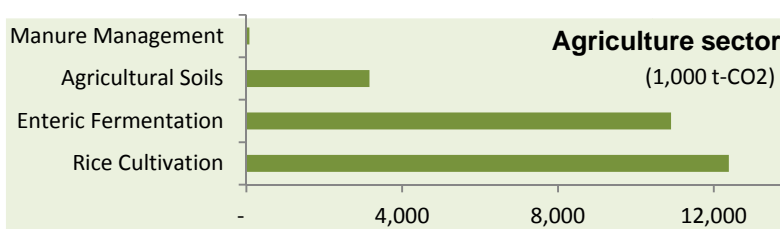
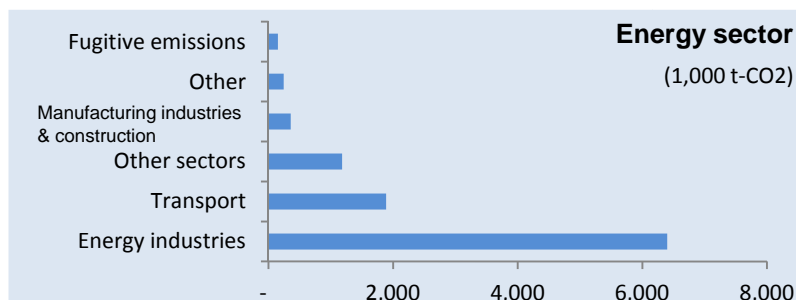
Phone: (95-067)40 5009 Fax: (95-067)-40 5012 E-mail: dgpsmof@mptmail.net.mm

Relevant Information

(1) National GHG Inventories

Year 2005 (1,000 t-CO₂)

Total emissions and removals	15,628
Emissions	18,868
Removals	--3,240



GHG Emissions by sector

Source; UNFCCC GHG demission profiles http://unfccc.int/ghg_data/ghg_data_unfccc/ghg_profiles/items/4626.php7

Submission of National Communications

First 26 December 2012

Source:: UNFCCC http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php

Kenta Usui, IGES Climate and Energy Area **December, 2013**



Market Mechanisms Country Fact Sheet: The Philippines

National Climate Change Policy

(1) National Framework Strategy on Climate Change (NFSCC) 2010-2022

(Adopted in 2010)

Vision

A climate risk-resilient Philippines with healthy, safe, prosperous & self-reliant communities, and thriving & productive ecosystems

Objective

To establish the roadmap in creating a climate risk-resilience, with the general goal of building the adaptive capacity and increasing the resilience of natural ecosystems to climate change and optimizing mitigation opportunities.

Goal

To build the adaptive capacity of communities and increase the resilience of natural ecosystems to climate change, and optimize mitigation opportunities towards sustainable development.

Adaptation

- Enhanced Vulnerability and Adaptation Assessments
- Integrated Ecosystem-Based Management
- Climate-Responsive Agriculture
- Water Governance & Management
- Climate-Responsive Health Sector
- Disaster Risk Reduction

Mitigation

- Energy Efficiency & Conservation
- Sustainable Infrastructure
- Renewable Energy
- Environmentally Sustainable Transport
- National REDD+ Strategy
- Waste Management

Source: National Framework Strategy on Climate Change
Climate Change Commission <http://www.climate.gov.ph/>

(2) National Climate Change Action Plan

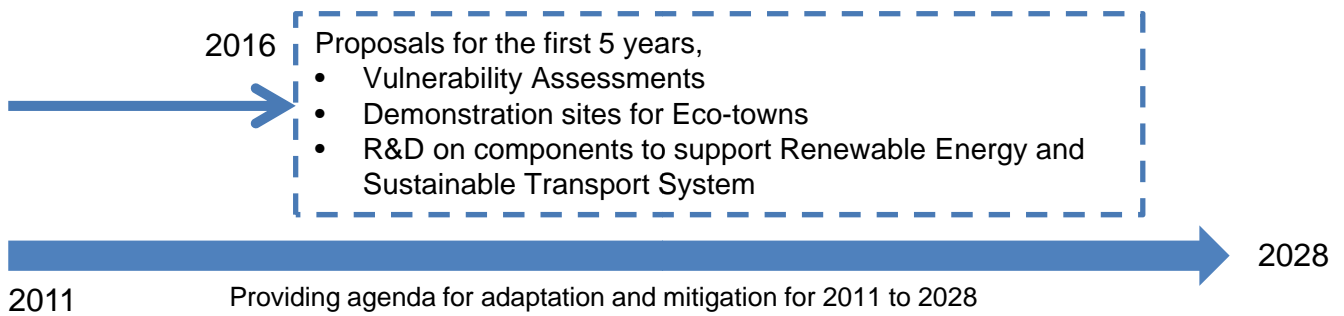
(Adopted in 2011)

Objective

To address a realistically achievable country-driven programme of action for integrated climate change adaptation and mitigation

Goal

To build the adaptive capacity of women and men in their communities, increase the resilience of vulnerable sectors and natural ecosystems to climate change, and optimize mitigation opportunities towards gender-responsive and rights-based sustainable development

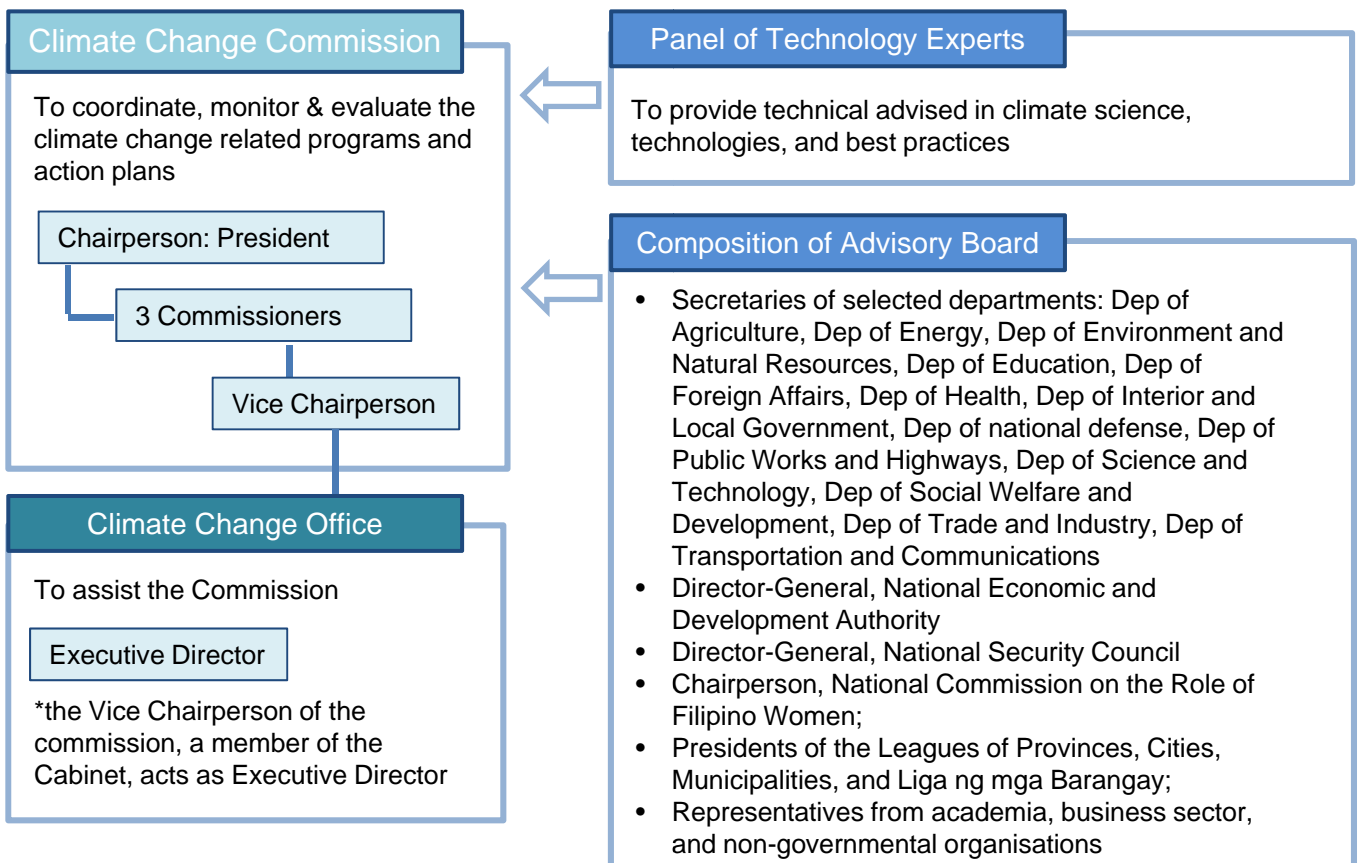


Seven strategic priorities

1. Food Security
2. Water Sufficiency
3. Ecosystems and Environmental Stability
4. Human Security
5. Climate-smart Industries and Services
6. Sustainable Energy
7. Knowledge and Capacity Development

Source: National Climate Change Action Plan

(3) Organisational Charts



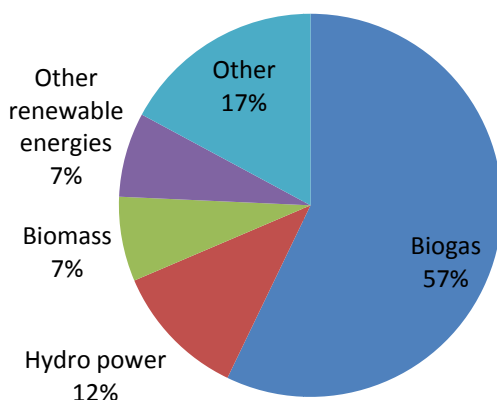
Source: Republic Act No.9729. Republic of the Philippines

Market Mechanism Instruments

(1) The Clean Development Mechanism (CDM)

CDM projects and PoAs status

Project Status	Number of projects	Number of PoAs
Registered	70	4
At or after the validation stage	10	6



Registered CDM Projects by type

Source: IGES, IGES CDM Project Database (as of 30 October 2013), <http://www.iges.or.jp/en/climate-energy/mm/publication.html#03>

List of registered PoAs

Title	Project type	Methodology	Emission reductions (t-CO ₂ /y)	CME
RE2Grid PoA	Hydro power, Other renewable energies, Wind power	ACM0002	53,543	Carbonergy Business Consultancy Services
Philippines Mini-Hydro PoA.	Hydro power	AMS-I.D.	2,000	Land Bank of the Philippines (LBP)
Landfill gas recovery and combustion with renewable energy generation from sanitary landfill sites under Land Bank of the Philippines Carbon Finance Support Facility	Methane recovery & utilization	ACM0001	469,182	Land Bank of the Philippines (LBP)
Methane recovery and combustion with renewable energy generation from anaerobic animal manure management systems under Land Bank of the Philippines Carbon Finance Support Facility	Biogas	AMS-III.D.	23,105	Land Bank of the Philippines (LBP)

Source: IGES, IGES CDM Programmes of Activities Database (as of 29 November 2013) <http://www.iges.or.jp/en/climate-energy/mm/publication.html#03>

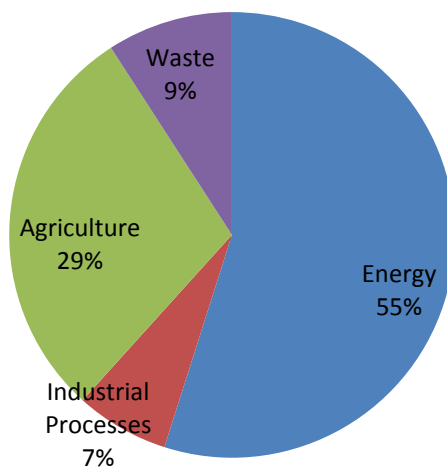
Contact Information: DNA in the Philippines

Environmental Management Bureau, the Department of Environment and Natural Resources
 Address: DENR Compound, Visayas Avenue, Diliman, Quezon City 1116, The Philippines
 Phone: (+632) 920 2246 Fax: (+632) 928 3725

Relevant Information

(1) National GHG inventories

Year 2000	(1,000 t-CO ₂)
Total emissions and removals	21,767
Emissions	126,878
Removals	-105,111



GHG emissions by sector

Source: National Climate Change Action Plan

Submission of National Communications

First	19 May 2000
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Source:: UNFCCC http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php



Market Mechanisms Country Fact Sheet: Thailand

National Climate Change Policy

(1) The Eleventh National Economic and Social Development Plan (2012-2016)

Main concept	<ul style="list-style-type: none"> Philosophy of Sufficiency Economy A holistic approach with development centered on people Holistic development of the country toward balance and linkages between all dimensions Vision 2027 is a principal goal (pp. 21-22)
Objective	<ul style="list-style-type: none"> To promote a fair and peaceful society. To increase the potential of all Thais in a holistic manner by fostering a broader range of learning and by physical, mental, emotional, ethical and moral development imparted through social institutions. To develop an efficient and sustainable economy, and form links to production and service networks in ASEAN, based on technology, innovation and creativity. To improve food and energy security, and upgrade eco-friendly production and consumption toward a low carbon society. To preserve natural resources and the environment so they are able to maintain Thailand's ecology and biodiversity, and provide a secure foundation for development. (p.24)
Year adopted	2011



In Chapter 8 of this Plan...

Title	Strategy for Managing Natural Resources and the Environment to Achieve Sustainability
Objective	<ul style="list-style-type: none"> To conserve and, when necessary, restore natural resources and the environment so they are sufficient to stabilize the ecosystem and provide a firm foundation for the country's development. To promote production and consumption that is environmentally sound in order to redirect the country toward a low carbon emission society. To create resilience so as to be prepared to deal with impacts from climate change and worldwide environmental issues. To create fairness in access to and utilization of natural resources, and to protect benefits that the country receives from international agreements and commitments. (p.154)



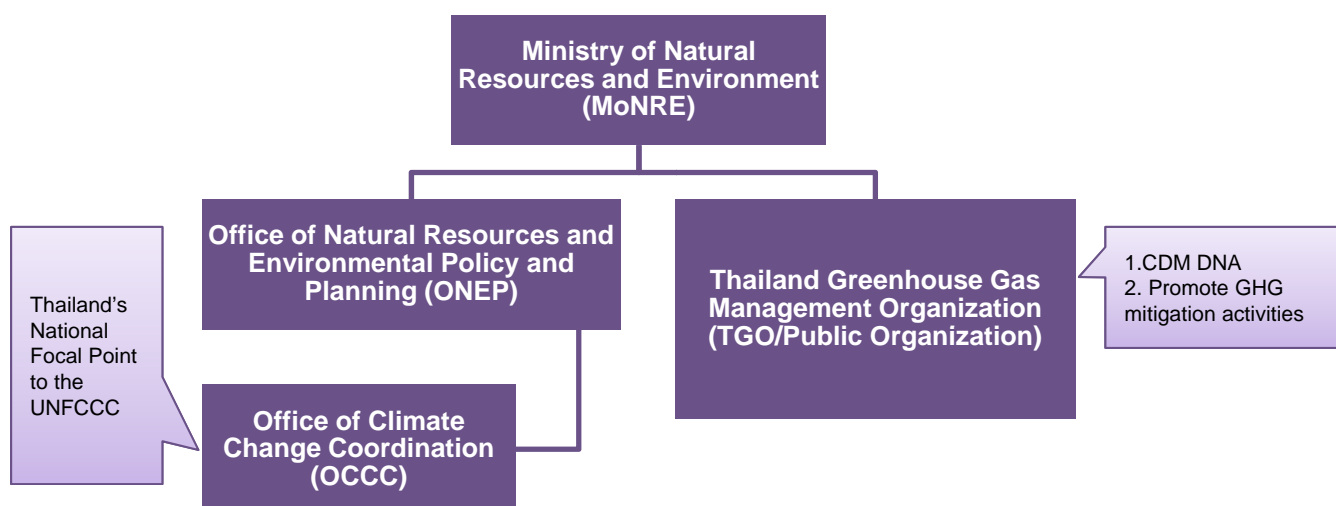
In the Development Guideline of this Strategy...

Statements related to market mechanisms

- ...studies should be undertaken about the preparation of the domestic carbon market... (p.123)
- ... Establish a National Registry System to bolster domestic greenhouse gas reduction including ... establishment of a Thai carbon market in the future. (p.124)

Source: National Economic and Social Development Board. (2011) The Eleventh National Economic and Social Development Plan (2012-2016).

(2) Organisational Charts



Source: "National Strategy on Climate Change Management: Modeling and Data Application", "Data Democracy Workshop on Climate Change" Geoinformatics and Space Technology Development Agency 7-10 June, 2010 Bangkok, Thailand.

Market Mechanism Instruments

(1) Domestic market mechanism

Objectives

- Support voluntary GHG reduction activities
- Encourage private companies who attempt to reduce their GHG emissions, implement cost-effective GHG reduction activities
- Learn how to manage domestic emission trading scheme / carbon offsetting program

Voluntary Carbon Markets in Thailand

Voluntary Emission Reduction Projects (VER)

Thailand Voluntary Emission Reduction Program (T-VER)

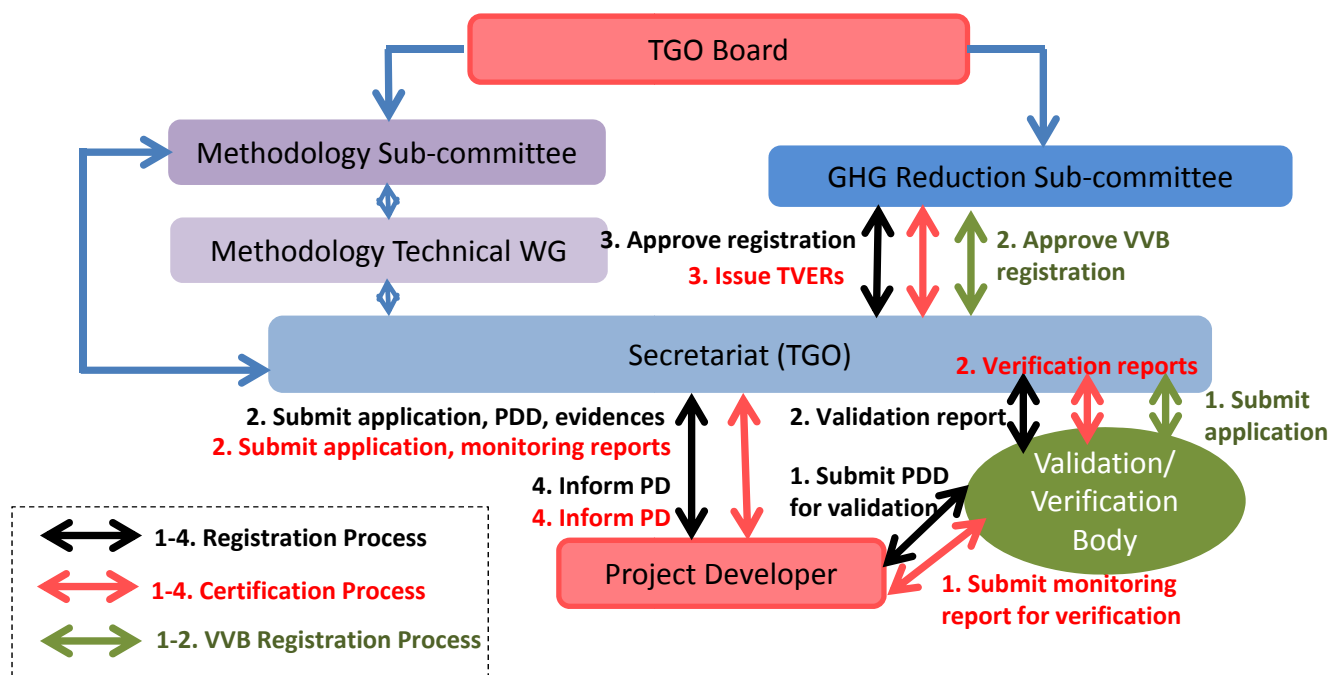
Thailand Voluntary Emission Trading Scheme (TVETS)

Characteristics of T-VER and TVETS:

	T-VER	TVETS
Type	Project-based	Cap-and-Trade
Eligibility/ Target	Energy efficiency, etc.	Industrial Structure
MRV	Domestic	ISO 14064-1 / 14064-3 / 14065
Carbon Credit	TVERs	Allowances
Registry	T-VER	ETS
Buyers	Government / CSR companies / Brokers	Entities / Traders
Status	Launch in Oct 2013	Launch in Oct 2014

Source: Sumetchoenprachya (2013) Progress on the Development of Voluntary Carbon Market in Thailand. http://www.tgo.or.th/download/seminar/presentation/2013/Feb/22/03_Progress_VCM_20130222_Sumon.pdf

T-VER Scheme Framework



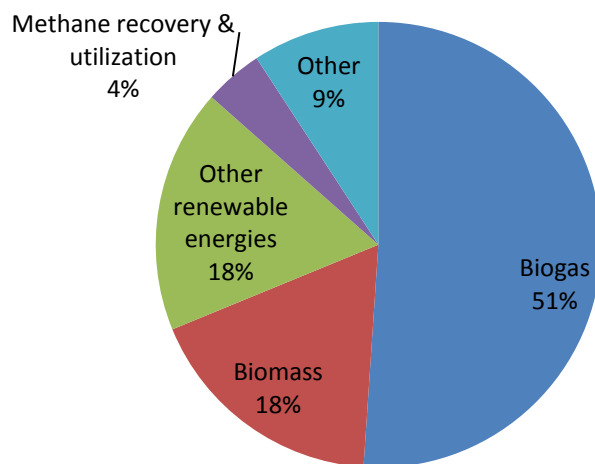
Source: Sumethoengprachya (2013) Progress on the Development of Voluntary Carbon Market in Thailand. http://www.tgo.or.th/download/seminar/presentation/2013/Feb/22/03_Progress_VCM_20130222_Sumon.pdf

(2) The Clean Development Mechanism (CDM)

CDM projects and PoA status

Project Status	Number of projects	Number of PoAs
Registered	141	7
At or after the validation stage	28	0

Registered projects



Registered projects by type

Source: IGES, IGES CDM Project Database (as of 30 October 2013) <http://www.iges.or.jp/en/climate-energy/mm/publication.html#03>

List of registered PoAs

Title	Coordinating/managing entity (CME)	Project type	Methodology	PoA Annual ERs (tCO ₂ /y)
GRT Energy Small Scale Solar PV (PoA)	GRT Energy Co.,Ltd.	Other renewable energies	AMS-I.D.	3,338
Biomass Power Development programme in Thailand	Advance Carbon Securities Ventures (ACSV) Company Limited	Biomass	AMS-I.D.	37,941
Thailand Small Scale Livestock Waste Management Program	Energy Research and Development Institute of Chiang Mai University	Biogas	AMS-III.D.	55,771
Thailand energy efficiency improvement for street lightings	Provincial Electricity Authority (PEA)	Energy Efficiency	AMS-II.L.	23
Solar Power Programme of Activities	EDF South East Asia Limited (EDF SEA)	Other renewable energies	AMS-I.D.	5,784
TBEC Biogas Programme for South East Asia	Thai Biogas Energy Company (TBEC)	Biogas	ACM0014	21,279
Small-Scale Renewable Energy PoA in Thailand	Carbon Coordination and Managing Entity Ltd. (CCME)	Biogas, Biomass, Hydro power, Other renewable energies, Wind power	AMS-I.D.	7,918

Source: IGES, IGES CDM Programmes of Activities Database (as of 29 November 2013) <http://www.iges.or.jp/en/climate-energy/mm/publication.html#03>

Contact Information: DNA in Thailand

Thailand Greenhouse Gas Management Organization (TGO)
120 Mu 3, Building B, 9th Floor, The Government Complex, Chaeng Wattana Road, Laksi, Bangkok 10210
Thailand
Phone: (+66) 2 141 9790 / 9801 (Executive Office) Fax: (+66) 2 143 8400 / 1

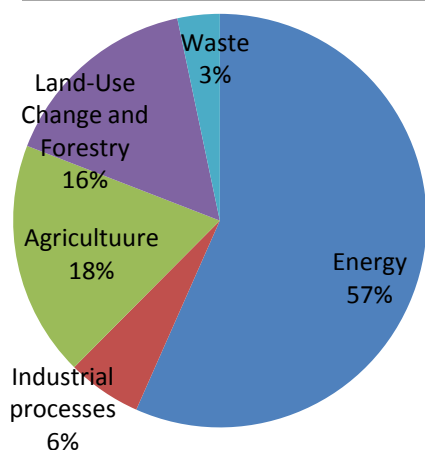
Relevant Information

(1) National GHG inventories

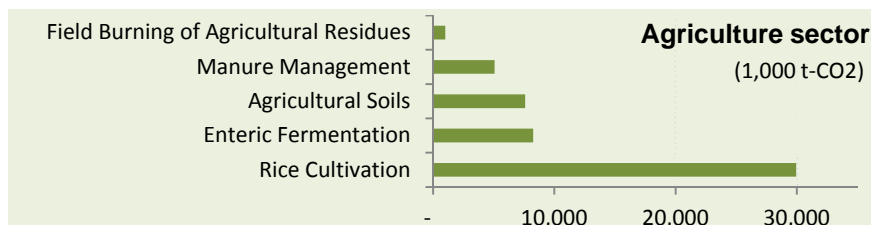
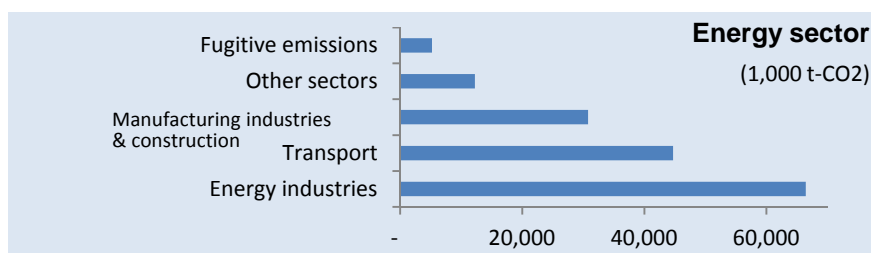
Year 2000

(1,000 t-CO₂)

Total emissions and removals	229,056
Emissions	281,430
Removals	-52,374



GHG Emissions by sector



Source: Thailand's second National Communication to UNFCCC

http://unfccc.int/files/national_reports/non-annex_i_natcom/submitted_natcom/application/pdf/snc_thailand.pdf

Submission of National Communication

First	13 November 2000
Second	24 March 2011

Source: UNFCCC http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php



Market Mechanisms Country Fact Sheet: Viet Nam

National climate change policy in Vietnam

- The oriented strategy for sustainable development in Vietnam (VIETNAM'S AGENDA 21)
(The Prime Minister 153/2004/QĐ-TTg 17/8/2004)
- National target program to respond to climate change (NTP-RCC)
(The Prime Minister 158/2008/QĐ-TTg 2/12/2008)
- Action plan to respond to climate change
(Ministry of Trade and Industry 4103/QĐ-BCT 3/8/2010)
- Approval criteria for evaluating the priority projects support program to respond to climate change (SP-RCC) (Prime Minister 1719/QĐ-TTg 4/10/2010)
- National climate change strategy
(The Prime Minister 2139/QĐ-TTg 5/12/2011)
- National target programme to respond to climate change (NTP-RCC) 2012-2015
(The Prime Minister 1183/QĐ-TTg 30/8/2012)
- National green growth strategy
(The Prime Minister 1393/QĐ-TTg 25/9/2012)
- Plan of greenhouse gas emission management; management of carbon trading activities to the world market (The Prime Minister 1775/QĐ-TTg 21/11/2012)
- Guide to capital management mechanism, support program to respond to climate change (Circular; Ministry of Planning and Investment, Ministry of Finance and Ministry of Natural Resource and Environment 03/2013/TTLT-BTNMT-BTC-BKHĐT)

(1) National Climate Change Strategy

(Approved on 5 December 2011)

Objective

- ❑ Developing the capabilities of the country, carried out simultaneously solutions to adapt to the impacts of climate change and mitigation of GHG emissions, ensuring the safety of people's lives and property, aims to sustainable development.
- ❑ Strengthening the capacity to adapt to climate change, human and natural systems, developing low-carbon economy in order to protect and enhance the quality of life, security and sustainable development countries in the context of global climate change and actively with the international community to protect the global climate system.

Targets

Targets in strategic task 5: GHG emission reduction to protect global climate system

a) Development of new and renewable energies <ul style="list-style-type: none"> By 2020: total capacity of hydropower plants reaches 20,000-22,000 MW. Increase the share of new and renewable energies by 5% of the total commercial primary energies by 2020 and 11% by 2050 	
b) Energy saving and efficiency Industrial production and construction <ul style="list-style-type: none"> By 2020: 90% of industrial facilities using cleaner production and reducing consumption of energy, fuel and materials. By 2020: raise the total contribution of industrial production using high technologies, ensuring added value in the total industrial production value, by about 42-45%; promote innovation towards high technologies; by 2020: 20% of new high technologies and equipment. By 2050: increase the contribution of industries using high technologies to above 80% 	Transportation <ul style="list-style-type: none"> By 2020: the transportation system to meet the societal needs. By 2050: complete the modernization of the domestic transportation network as well as the international transportation network. Accelerate the transformation to using compressed natural gas and liquefied gas in buses and taxis, with 20% of buses and taxis by 2020, and 80% by 2050.
c) Agriculture <ul style="list-style-type: none"> After every 10 years, reduce 20% of the GHG emission, while securing 20% of the sector growth and lowering the rate of poverty by 20%. 	
d) Solid waste management <ul style="list-style-type: none"> By 2020: 90% of the urban household solid waste to be collected and treated, of which 85% to be recycled, reused and recovered for energy generation. 	

Source: The Prime Minister, Decision on approval of the national climate change strategy (2139/QĐ-TTg)

(2) National Target Program to Respond to Climate Change period 2012-2015

(Approved on 30 August 2012)

Objective

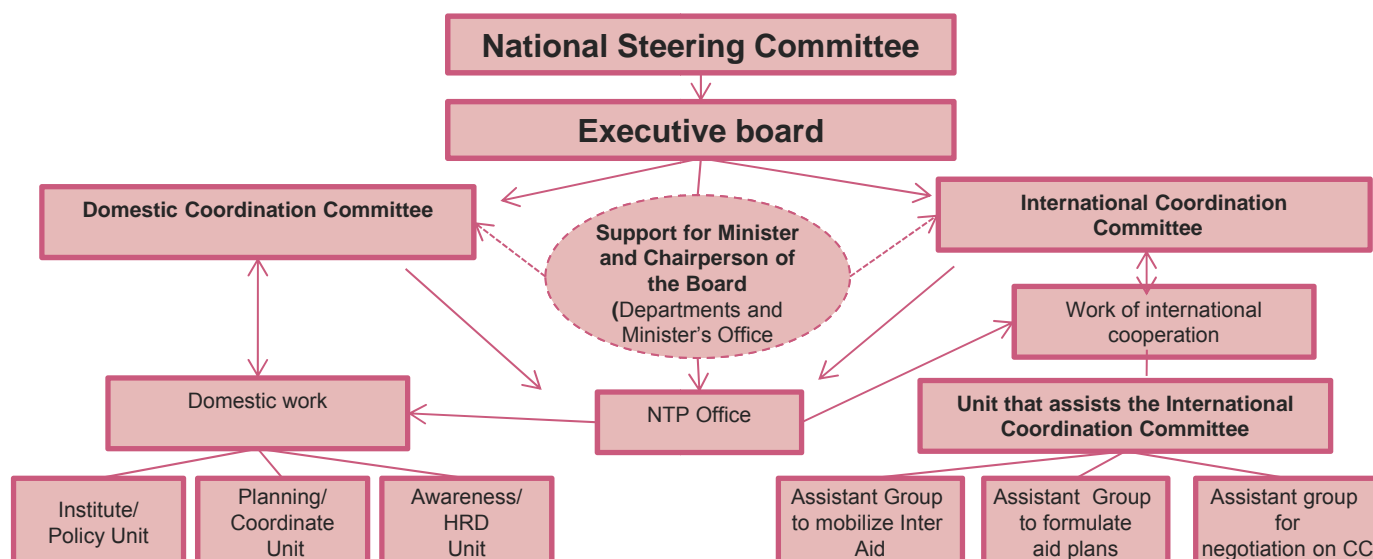
To gradually realize the national strategy on climate change, by increasing awareness and capacity to adapt to climate change, reducing greenhouse gas emissions and building the low carbon economy cooperatively with the international community, in order to protect the global climate system.

Components

- Develop and promulgate a national action plan to respond to climate change, an action plan to respond to climate change of ministries, branches and localities
- Establish digital evaluation monitoring systems which review a plan of socio-economic development in conditions of climate change and sea level rise in Vietnam
- Construction of flood maps and climate change scenarios including weather and sea level rise, associated with the geographic information system to identify risk of natural disasters,
- Continued research, updating climate change scenarios, assessing the impact, especially by sea level rise, in fields, sectors and area and identifying measures to respond to climate change ;
- Completion of a number of key tasks, especially urgent priorities identified in the action plan to respond to climate change
- Implementation of pilot adaptation to climate change and sea level rise in two pilot provinces
- To promulgate policies to adapt to climate change and mitigation of greenhouse gas emissions in the priority sectors; agriculture, forestry, land use, water resources, energy, transportation, building, poverty reduction and social security
- Developing institution to encourage financial institutions and mobilize international bilateral and multilateral donor, for investment and technology to cope with climate change ;
- Disseminating propaganda to improve basic knowledge about climate change

Source: The Prime Minister, Decision on approval of national target programme to respond to climate change (NTP-RCC) 2012-2015 (1183/QĐ-TTg)

Organisational structure



Source: Ministry of Natural Resources and Environment (MONRE), Overview of NTP-RCC & SP-RCC
http://www.ntprcc.gov.vn/index.php?option=com_content&view=category&layout=blog&id=80&Itemid=145&lang=en

(3) National green growth strategy

(Approved on 25 September 2012)

Objective

Green growth, as a mean to achieve the low carbon economy and to enrich natural capital, will become the dominant trend in sustainable economic development which requires that mitigation of GHG emissions and increase of capability to capture GHG are gradually becoming essential indicators in social-economic development.

Strategic task

Reduce the GHG intensity and promote the use of clean and renewable energies

	Reduce GHG emissions	Reduce the GHG intensity	Reduce energy consumption per unit of GDP	Reductions with domestic effort	Reductions with International supports
Period 2011-2020	•10% - 20% in energy sector as compared to BAU	8-10% as compared to 2010	1-1.5% per year	10%	10%
Towards 2030	•1.5-2% per year at least •20-30% in energy sector as compared to BAU			10%	20%
Towards 2050	•1.5-2% per year				

Greening production

- The value of high-tech and green-tech products will make a share of 42-45% in GDP
- The rate of manufacturing stations which meets environment standards reaches 80%
- The rate of applying clean technology reaches 50%
- Enhancing investments for supporting sectors protecting environment
- Enriching natural capital will reach at 3-4% of GDP.

Greening lifestyle and promoting sustainable consumption

- The rate of cities Grade III (waste water collecting and treating systems meet regulated standards): 60%, and that of those at Grade IV, Grade V and craft villages: 40%
- Improving environment in severely polluted areas 100%
- Rate of waste that is collected and treated area for trees reaches urban standard
- Share of public transportation in medium and large cities reaches 35-45%
- The rate of medium and large cities gaining green standard reaches 50%

Source: The Prime Minister, Decision on approval of the national green growth strategy (No: 1393/QĐ-TTg)

Market Mechanism Instruments

(1) Domestic market mechanism

Plan of greenhouse gas emission management; management of carbon trading activities to the world market

(Approved on 21 November 2012)

Objective

- ❑ Management of GHG emission in order to implement the UNFCCC and other international agreements in which Vietnam is a party, at the same time take advantage of the opportunity to develop low carbon economy, green growth with the international community in the efforts to reduce GHG emission, contributing to the implementation of the goal of country's sustainable development
- ❑ Managing and monitoring the efficiency of the purchase, sale and transfer of carbon credits generated from the mechanism inside and outside the framework of the Kyoto Protocol to the international market.

Targets and measures

GHG emissions reduction target by sector	Measures
Energy and transportation 8%	<ul style="list-style-type: none"> • Increase efficiency and save energy conservation • Development of renewable energy • Conversion of fossil fuel use in electricity production • Use associated gas in oil • Development of public transport • Using LPG to replace gasoline, diesel oil for transport of passengers • Production of building materials, urban infrastructure
Agriculture 20%	<ul style="list-style-type: none"> • Application of advanced rice farming practices in the direction of saving water and reducing input costs • Application of technical measures to improve fertilizer use efficiency, reduce emissions of N₂O in rice cultivation • Applying solutions to save energy and fuel in soil preparation, watering industrial plants, developing and applying minimum cultivation measures to reduce GHG emission; • Collecting, recycling, re-useing of agricultural by-products, Development and application of organic waste treatment technology in the cultivation of vegetables, sugar cane, short and long-term industrial crops • Change the diet of livestock and poultry. Provide MUB(multi-nutrient blocks) for dairy cows • Application process good agricultural practices in Vietnam (VIETGAP) in animal husbandry • Use of antibiotics to intestinal bacteria to reduce the level of GHG emissions from livestock • Development of biogas technology and collection systems, storage and handling of manure of livestock and poultry.
LULUCF 20%	<ul style="list-style-type: none"> • Forest Protection • Afforestation and reforestation • Promote reforestation and natural regeneration • Reduce GHG emissions through efforts to limit deforestation and forest degradation, sustainable management of forest resources, conserve and enhance forest carbon stocks (REDD)
Waste 5%	<ul style="list-style-type: none"> • Recovery and use of methane (CH₄) from landfills • Industrial wastewater treatment.

*The base year of the target is year 2005

Source: The Prime Minister, Decision on approval of project of greenhouse gas emission management; management of carbon credit business activities to the international market (No. 1775/QĐ-TTg)

Period 2012 - 2015

□ **Institutional framework**

- Establishing the steering committee
- Developing framework of NAMA program in Vietnam.
- Developing relevant national and sectoral-level MRV system, related for NAMA
- Developing mechanisms and fiscal policies to form and operate the carbon markets

□ **Regal framework**

- Reviewing, assessing and completing the legal system for CDM projects
- Establishing regulations governing the programs and projects of carbon credit trading outside the Kyoto Protocol.

□ **Research and database development**

- Setting up the system of national GHG inventory
- Developing database on GHG inventory of year 2005 under the guidance of the IPCC
- Preparing the basic emission scenarios by 2020 for the areas of energy, agriculture, LULUCF and waste
- Studying, developing and disseminating technologies to reduce/sink GHG emissions in the areas of energy, transportation, agriculture, LULUCF and waste
- Studying the preparation of methodology, registration and pilot implementation of NAMA
- Developing database for the management of carbon credit trading under the Kyoto Protocol

□ **Awareness raising and capacity building**

- Awareness raising and identifying a responsibility of GHG emissions for all level of sector, localities and entrepreneur
- Awareness raising for the implementation of carbon credit trading activities in accordance with the of national and international provisions
- Enhancing the capacity of policy makers, management staff of ministries, sectors and localities in managing carbon credit trading activities

Period 2016 - 2020

□ **Institutional framework**

- Developing and applying system of standard and target of energy consumption and emissions

□ **Research and database development**

- Preparing periodic reports on emission and reduction of GHG emission
- Summarizing and assessing the efficiency of project implementation
- Making report to the Prime Minister on the results of implementation of the project and proposing a appropriate work for the next stage.

□ **Awareness raising and capacity building**

- Raising awareness, responsibility, strengthening the capability for the implementation of the reduction of GHG emissions
- Strengthening the capacity of organization, institution, policy of managing and monitoring of GHG emissions
- Strengthening the management of carbon credit trading activities to the international market in accordance with the domestic and international context

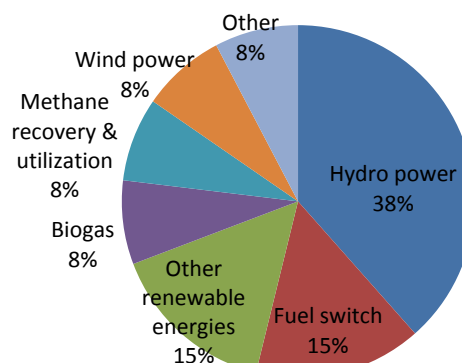
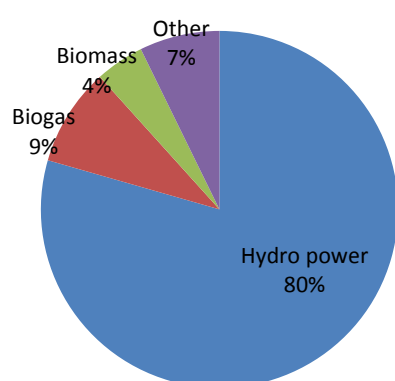
□ **Implementation**

- Implementing a number of targets to reduce emissions and increase capacity of sinks, specifically in the areas of energy, transportation, agriculture, LULUCF and waste
- Periodically inventorying GHG
- Registering and widely deploying NAMA on the basis of the successful results of the pilot NAMA

(2) Clean Development Mechanism (CDM)

CDM projects and PoAs status

Project Status	Number of projects	Number of PoAs
Registered	248	10
At or after the validation stage	10	1



CDM projects

PoAs

Registered projects and PoAs by type

Source: IGES, IGES CDM Project Database (as of 30 October 2013), IGES CDM Programmes of Activities Database (as of 1 November 2013)
<http://www.iges.or.jp/en/climate-energy/mm/publication.html#03>

PoAs supporting governments' initiative

●PoA 5816 :Vietnam National Biogas Programme

CME: Ministry of Agriculture and Rural Development (MARD)

Methodology: AMS-I.C. ver.18 **Registration date:** 11 January 2013

Project description: Reduce GHG emissions from fossil fuels used by installing biogas digesters in households in Vietnam.

Related policy: There are no national regulations prescribing the implementation of biogas facilities in small farm holders' households.

●PoA 6810 Vietnam Renewable Energy Development Program (REDP)

CME: Ministry of Industry and Trade of Vietnam (MOIT)

Methodology: ACM0002 ver.13 **Registration date:** 19 December 2012

Project description: The project overcomes multiple barriers that prevent investment in the renewable energy sector in Vietnam and contributes to the greenhouse gas emission abatement.

Related policy:

-Vietnam's national energy development strategy up to 2020, with 2050 vision (Prime Minister No. 1855/QD-TTg 27/12/2007)

-Planning on national electricity development in the 2006-2015 period, with a vision to 2025 taken into consideration (Prime Minister decision No: 110/2007/QD-TTg)

Relevant information: The World Bank supports to REDP by provide a re-financing facility to participating commercial banks and technical assistance of application and monitoring.

Source: <http://www.worldbank.org/projects/P103238/vietnam-renewable-energy-development-project?lang=en>

Grid Emission Factor

(t-CO₂/MWh, 2011)

OM	BM	CM (CM; OM:BM 50:50)
0.6243	0.6242	0.6244

Source: Department of meteorology , Hydrology and Climate Change, MONRE and Ozone Layer Protection Centre "Study, definition of Vietnam grid emission factor"
http://www.noccop.org.vn/Data/vbpg/Airvariable_Idoc_61vnBC%20cuoi%20cung%202011.pdf

Contact information: DNA in Vietnam

Standing Office of Viet Nam National Steering Committee for United Nations Framework Convention on Climate Change and Kyoto Protocol, Ministry of Natural Resources and Environment of Viet Nam

Address: No. 10 Ton That Thuyet street, Cau Giay district, Ha Noi, Viet Nam

Phone: (84-4) 377 593 84 / (84-4) 377 593 85 Fax: (84-4) 377 593 82

Web: <http://www.noccop.org.vn/index.php>

(3) Joint Crediting Mechanism

JCM negotiation status

Date of agreement on the JCM	2 Jul 2013
1 st Joint Committee meeting	18 Sep 2013 (Hanoi)

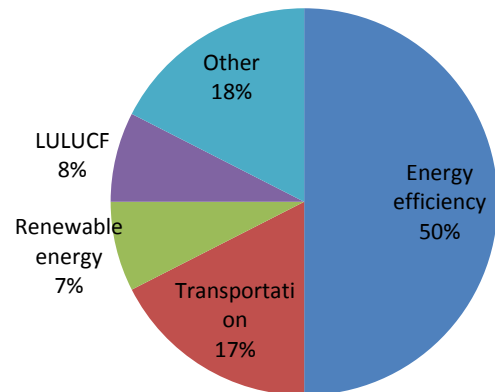
Documents

Type	Title
General	Memorandum of Cooperation on Low Carbon Growth between the Japanese side and the Vietnamese side

Source: New market mechanism platform
<http://www.mmechanisms.org/e/index.html>

JCM feasibility studies (2010-2013)

Total 40 studies



Source:
 Global Environment Center Foundation
http://gec.jp/main.nsf/en/Activities-Climate_Change_Mitigation-Top
 Ministry of Economy, Trade and Industry
http://www.meti.go.jp/policy/energy_environment/global_warming/global.html
 New Energy and Industrial Technology Development Organization
<http://www.nedo.go.jp/english/index.html>

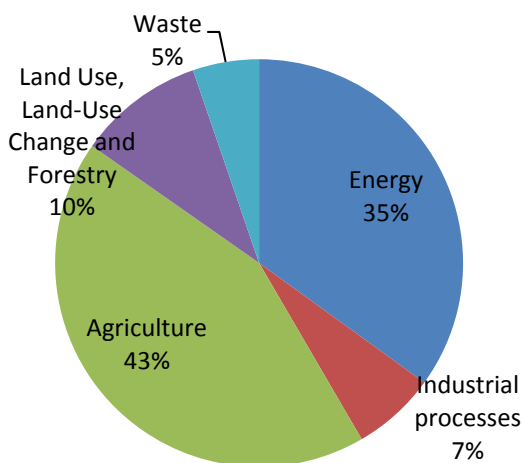
Relevant Information

(1) National GHG Inventories

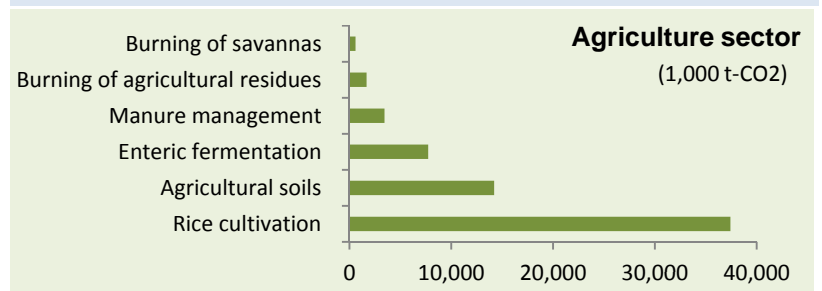
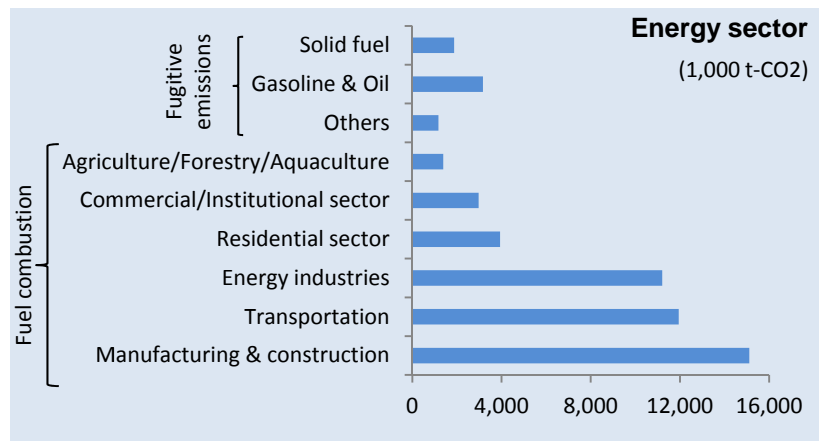
Year 2000

(1,000 t-CO₂)

Total emissions and removals	150,899
Emissions	226,647
Removals	-75,749



GHG Emissions by Sector



Source: MONRE, Viet Nam second national communication to the United Nations Framework convention on Climate Change
http://unfccc.int/essential_background/library/items/3599.php?such=j&symbol=VNM/COM/2%20E#beg

Submission of National Communication

First	2 December 2003
Second	7 December 2010

Source: UNFCCC http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php

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**Climate and Energy Area,
Institute for Global Environmental Strategies (IGES)**

IGES Market Mechanisms Country Fact Sheet provides current and basic information on market mechanisms in selected Asian countries. The contents of this booklet are based on the viewpoints of the editors, not of IGES. Careful attention was paid for the accuracy of the data at the time of publication and neither the editors nor publisher can accept any legal responsibility or liability for any errors or omissions that may be made. Please contact the following address if you find errors or have some comments: <mm-info@iges.or.jp>. This booklet is downloadable at <<http://www.iges.or.jp/en/cdm/report.html>>.

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