

ATTACHMENT 1  
PRESIDENTIAL REGULATION OF THE REPUBLIC OF INDONESIA  
NUMBER : 61 YEAR 2011  
DATE : 20 SEPTEMBER 2011

**CORE ACTIVITIES**  
**IN NATIONAL ACTION PLAN FOR GREENHOUSE GAS EMISSIONS REDUCTION**

**AGRICULTURAL SECTOR**

Emission Reduction Target (26%): 0.008 (Giga Tonne) CO<sub>2</sub>e

Emission Reduction Target (41%): 0.011 (Giga Tonne) CO<sub>2</sub>e

Policies taken to support the RAN-GRK :

1. Stabilization of the national food security and the enhancement of agricultural products with low greenhouse gas (GHG) emissions
2. Enhancement of the irrigation system function and maintenance

Strategies:

1. Optimize land and water resources
2. Apply land management and agricultural farming technologies that have lowest GHG emissions and can absorb CO<sub>2</sub> optimally
3. Stabilize the water level elevation and arrange for uninterrupted circulation of water in irrigation network

1. Improvement...

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	INDICATION OF REDUCTION (million tonne of CO <sub>2</sub> e)	RESPONSIBLE INSTITUTION
1.	Improvement and maintenance of irrigation network	<p>a. An area of 1.34 million ha of irrigation network is repaired</p> <p>b. An area of 2.32 million ha of irrigation network is in operation and maintained</p>	2010-2014	<p>24 Provinces: Nanggroe Aceh Darussalam (NAD), North Sumatra, West Sumatra, Jambi, Bengkulu, Bangka Belitung, South Sulawesi, Lampung, Banten, West Java, Central Java, Yogyakarta, East Java, South Kalimantan, East Kalimantan, Bali, NTT, NTB, North Sulawesi, Central Sulawesi, North Sulawesi, South Sulawesi, Maluku, and Papua</p>	0.16	Ministry of Public Works
2.	Optimization of the land use	An area of 300,500 ha of crop plant agricultural lands is managed without burning	2011-2014	<p>8 Provinces: North Sumatra, Riau, Jambi, South Sumatra, West Kalimantan, South Kalimantan, East Kalimantan, and Central Kalimantan</p>	4.18	Ministry of Agriculture
3.	Application of plant farming technologies	A technology to protect crops from infestation by pests and from the climate change effects is applied on an area of 2.03 million ha	2010-2014	All provinces, except DKI Jakarta	32.42	Ministry of Agriculture
4.	Utilization of organic fertilizers and bio-pesticides	Organic fertilizers and bio-pesticides are utilized on an area of 250,000 ha	2010-2014	All provinces	10.0	Ministry of Agriculture

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	INDICATION OF REDUCTION (million tonne of CO <sub>2</sub> e)	RESPONSIBLE INSTITUTION
5.	Development of plantation (oil palm, rubber, cacao) on no-forest / abandoned / degraded / Other Use (APL) areas	<p>a. Plantations are developed and production and productivity and quality of perennial plants are improved, with target oil palm of 860,000 ha and rubber of 105,200 ha</p> <p>b. Plantations are developed and production and productivity and quality are improved for spice and refreshing plants, with target cacao of 687,000 ha</p>	2011-2014	<p>Oil palm in 19 provinces: NAD, North Sumatra, West Sumatra, Bangka Belitung, Bengkulu, Riau, Jambi, South Sumatra, Lampung, West Kalimantan, Central Kalimantan, East Kalimantan, South Kalimantan, Central Sulawesi, South Sulawesi, West Sulawesi, North Sulawesi, Papua and West Papua</p> <p>Rubber in 14 provinces: North Sumatra, Riau, South Sumatra, West Sumatra, Jambi, Riau Islands, Bengkulu, Bangka Belitung, Lampung, Central Java, West Kalimantan, Central Kalimantan, South Kalimantan and East Kalimantan</p> <p>Cacao in 16 provinces: NAD, North Sumatra, West Sumatra, Bengkulu, Lampung, East Java, Bali, NTT, East Kalimantan, West Kalimantan, West Sulawesi, South Sulawesi, North Sulawesi, Central Sulawesi, North Maluku and Papua</p>	<p>Oil palm: 74.53</p> <p>Rubber: 2.38</p> <p>Cacao: 5.42</p>	Ministry of Agriculture
6.	Utilization of manure/urine of cattle and agricultural wastes for biogas	Cattle-Based Biogas with Community (BATAMAS) is developed and maintained in remote and full-of-cattle regions, as many as 1,500 community groups	2010-2014	All provinces	1.01	Ministry of Agriculture

## **FORESTRY AND PEAT LAND SECTORS**

Emission Reduction Target (26%): 0.672 (Giga Tonne) CO<sub>2</sub>e

Emission Reduction Target (41%): 1.039 (Giga Tonne) CO<sub>2</sub>e

Policies taken to support the RAN-GRK:

1. Reduction of GHG and at the same time promote a safe environment, prevent disasters, absorb workforce and increase state's and community's revenues
2. Management of marsh water system and network in marsh area
3. Maintenance of marsh reclamation network (including the existing peat lands)
4. Enhancement of productivity and efficient production of agriculture on peat lands with lowest emission and absorb CO<sub>2</sub> optimally

Strategies:

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. Conduct improvement on water system (network) and dividing blocks and stabilize water level elevation on marsh water system network
5. Optimise land and water resources without deforestation
6. Apply land management and agricultural farming technologies that have lowest GHG emissions and can absorb CO<sub>2</sub> optimally



NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	INDICATION OF REDUCTION (million tonne of CO <sub>2</sub> e)	RESPONSIBLE INSTITUTION
1.	Establishment of a Forest Management Organization (KPH)	120 units of KPH are formed	2010-2014	All provinces	31.15	Ministry of Forestry
2.	Planning for forest area utilization and business improvement	The grant of Business License for Utilization of Timber Forest Products – Natural Forest / Ecosystem Restoration (IUPHHK-HA/RE) on Logged Over Area (LOA) of 2.5 million ha	2010-2014	12 provinces: Jambi, West Sumatra, Central Kalimantan, West Kalimantan, South Kalimantan, East Kalimantan, West Sulawesi, Central Sulawesi, North Sulawesi, North Sulawesi, Gorontalo and Papua	22.94	Ministry of Forestry
		Improvement in non-timber forest product/environmental services is achieved	2010-2014	All provinces	1.38	Ministry of Forestry
3.	Development of the utilization of environmental services	2 demonstration activities of Emission Reduction from Deforestation and Degradation (REDD) in conservation areas (peat forests) are implemented	2010-2014	2 provinces: Jambi and Central Kalimantan	3.67	Ministry of Forestry
4.	Inauguration of forest areas	25,000 km Forest Area Boundary (outer boundary and boundary of forest area function) is arranged	2010-2014	All provinces	123.41	Ministry of Forestry

5. Improvement.....

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	INDICATION OF REDUCTION (million tonne of CO <sub>2</sub> e)	RESPONSIBLE INSTITUTION
5.	Improvement, rehabilitation, operation and maintenance of marsh reclamation network (including peat lands)	<p>a. Marsh reclamation network is improved in an area of 10,000 ha</p> <p>b. Marsh reclamation network is rehabilitated in an area of 450,000 ha</p> <p>c. Marsh reclamation network is in operation and maintained in an area of 1.2 million ha</p>	2010-2014	23 provinces: NAD, North Sumatra, Riau, West Sumatra, Jambi, Bengkulu, South Sumatra, Bangka Belitung, Lampung, Banten, West Java, Central Java, East Java, West Kalimantan, Central Kalimantan, South Kalimantan, East Kalimantan, Gorontalo, West Sulawesi, Central Sulawesi, North Sulawesi, South Sulawesi and Papua	5.23	Ministry of Public Works
6.	Management of peat lands for a sustainable agriculture	Research and development of land resources of 325,000 ha (including peat lands) for agricultural land management development	2011-2020	11 provinces: NAD, North Sumatra, Riau, Jambi, South Sumatra, West Sumatra, Lampung, West Kalimantan, South Kalimantan, East Kalimantan and Central Kalimantan	103.98	Ministry of Agriculture
7.	Development of agricultural land management in abandoned and degraded peat land areas to support plantation, animal raising and horticulture sub-sectors	Rehabilitation, reclamation and revitalization of abandoned and degraded peat lands in agricultural areas and optimized use of non-food crop lands of 250,000 ha	2011-2014	9 provinces: NAD, Riau, Jambi, South Sumatra, West Sumatra, West Kalimantan, South Kalimantan, East Kalimantan and Central Kalimantan	100.75	Ministry of Agriculture

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	INDICATION OF REDUCTION (million tonne of CO <sub>2</sub> e)	RESPONSIBLE INSTITUTION
8.	Implementation of a forest and land rehabilitation and forest reclamation in the prioritized watersheds (DAS)	500,000 ha of forest in prioritized watersheds are rehabilitated	2010-2014	All provinces	18.35	Ministry of Forestry
		Critical areas of 1.954,000 ha in prioritized watersheds are rehabilitated	2010-2014	All provinces, except DKI Jakarta	71.71	Ministry of Forestry
		6,000 ha of city forest is formed	2010-2014	All provinces, except DKI Jakarta	0.22	Ministry of Forestry
		40,000 ha of Mangrove/coastal forest is rehabilitated	2010-2014	All provinces, except DIY	1.47	Ministry of Forestry
9.	Development of social forestry	Facilitated designation of Community's Forest (HKm) / Village Forest (HD) management work area of 2,500,000 ha	2010-2014	25 provinces: NAD, North Sumatra, West Sumatra, Riau, Riau Islands, Jambi, South Sumatra, Bangka Belitung, Bengkulu, Lampung, DIY, NTB, NTT, West Kalimantan, Central Kalimantan, South Kalimantan, East Kalimantan, North Sulawesi, Gorontalo, Central Sulawesi, West Sulawesi, South Sulawesi, North Sulawesi, Maluku and North Maluku	91.75	Ministry of Forestry
		Facilitated setting up of business partnership in 250,000 Ha of people's forest	2010-2014	11 provinces: Riau, South Sumatra, Banten, West Java, Central Java, DIY, East Java, West Kalimantan, Central Kalimantan, South Kalimantan and East Kalimantan	9.18	Ministry of Forestry



NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	INDICATION OF REDUCTION (million tonne of CO <sub>2</sub> e)	RESPONSIBLE INSTITUTION
10.	Forest fire control	Decreased number of hotspots in Kalimantan, Sumatra and Sulawesi islands by 20% on average from 2005 - 2009, with level of success 67.20%	2010-2014	11 provinces: North Sumatra, Riau, Riau Islands, Jambi, South Sumatra, West Kalimantan, Central Kalimantan, South Kalimantan, East Kalimantan, South Sulawesi and West Sulawesi	21.77	Ministry of Forestry
11.	Forest investigation and protection	Handling of new cases of forest criminal acts (illegal logging, illegal mining and fire), at least 75% are settled	2010-2014	10 provinces: North Sumatra, Riau, Riau Islands, Jambi, South Sumatra, West Kalimantan, Central Kalimantan, South Kalimantan, South Sulawesi and West Sulawesi	2.30	Ministry of Forestry
12.	Development of conservation and essential ecosystem areas and management of protected forests	Improved management of essential ecosystems as life support by 10%	2010-2014	17 provinces: NAD, North Sumatra, Jambi, Bangka Belitung, West Sumatra, Riau, Central Sulawesi, Kepulauan Seribu, West Java, Central Java, East Java, Bali, NTB, West Kalimantan, Central Kalimantan, Gorontalo and West Papua	41.50	Ministry of Forestry
		Conservation and protected forest clearing in 12 prioritized provinces are controlled	2010-2014	12 provinces: North Sumatra, Riau, Jambi, South Sumatra, West Sumatra, Lampung, East Kalimantan, Central Kalimantan, South Kalimantan, West Kalimantan, North Sulawesi and Central Sulawesi	49.77	Ministry of Forestry



NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	INDICATION OF REDUCTION (million tonne of CO <sub>2</sub> e)	RESPONSIBLE INSTITUTION
13.	Enhancement of plantation forest businesses	Industrial plantation forest and people's plantation forest (HTI/HTR) areas of 3 million ha are reserved	2010-2014	26 provinces: NAD, North Sumatra, West Sumatra, Riau, Jambi, South Sumatra, Bengkulu, Lampung, Bangka Belitung, DIY, NTB, NTT, West Kalimantan, Central Kalimantan, South Kalimantan, East Kalimantan, North Sulawesi, Central Sulawesi, South Sulawesi, West Sulawesi, Gorontalo, Maluku, North Maluku, Papua and West Papua	110.10	Ministry of Forestry

ENERGY AND.....

## ENERGY AND TRANSPORTATION SECTORS

Emission Reduction Target (26%): 0.038 (Giga Tonne) CO<sub>2</sub>e

Emission Reduction Target (41%): 1.056 (Giga Tonne) CO<sub>2</sub>e

Policies taken to support the RAN-GRK:

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

Strategies:

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 (fossil)
2. Encourage the use of new and renewable energy in small and medium scales
3. (Avoid) – reduce the travel needs, particularly in city areas (trip demand management), through land use management, reduce travel activities and unnecessary distances
4. (Shift) – shift from using private vehicles (transportation facilities with high energy consumption) to low-carbon transportation pattern, such as non-motorized, public, or water transportation facilities
5. (Improve) – improve energy efficiency and carbon release reduction in motorized vehicles in transportation facilities

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	INDICATION OF REDUCTION (million tonne of CO2e)	RESPONSIBLE INSTITUTION
1.	Mandatory application of energy management for energy-intensive users	Apply energy management to 200 companies	2010-2014	All provinces	2.24	Ministry of Energy and Mineral Resources
		Apply energy management to 200 companies	2015-2020	All provinces	7.92	Ministry of Energy and Mineral Resources
2.	Implementation of energy conservation partnership program	Conduct energy conservation partnership program with private parties / communities in 1003 objects (building and industry)	2010-2014	All provinces	1.62	Ministry of Energy and Mineral Resources
		Conduct energy conservation partnership program with private parties / communities in 300 objects (building and industry)	2015-2020	All provinces	0.49	Ministry of Energy and Mineral Resources
3.	Enhancement of household utensils efficiency	Implementation of energy-saving technology in household utensils are performed: 7.90 million kWh by the end of 2014	2010-2014	All provinces	5.58	Ministry of Energy and Mineral Resources
		Implementation of energy-saving technology in household utensils are performed: 13.53 million kWh by the end of 2020	2015-2020	All provinces	4.17	Ministry of Energy and Mineral Resources

4. Supply .....



NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	INDICATION OF REDUCTION (million tonne of CO <sub>2</sub> e)	RESPONSIBLE INSTITUTION
4.	Supply and management of new renewable energy and energy conservation	The construction of the following are done: <ul style="list-style-type: none"> <li>• Micro Hydro Power Plant (PLTMH): 46.17 MW</li> <li>• Mini Hydro- Power Plant (PLTM): 182 MW</li> <li>• Solar Power Plant (PLTS): 102.1 MW</li> <li>• Wind Power Plant (PLTB): 21.67 MW</li> <li>• Biomass Power Plant: 0.4 MW</li> <li>• Village with Self-Reliance in Energy (DME): 250 villages</li> </ul>	2010-2014	All provinces	1,27 made up of: PLTMH: 0.21 PLTM: 0.85 PLTS: 0.11 PLTB: 0.02 Biomass: 0.00032 DME: 0.06	Ministry of Energy and Mineral Resources
		construction performed: <ul style="list-style-type: none"> <li>• PLTMH: 84.23 MW</li> <li>• PLTM: 510 MW</li> <li>• PLTS: 224.68 MW</li> <li>• PLTB: 37.53 MW</li> <li>• Biomass: 16.50 MW</li> <li>• DME: 450 Villages</li> </ul>	2015-2020	All provinces	3.13, made up of: PLTMH: 0.40 PLTM: 2.40 PLTS: 0.18 PLTB: 0.04 Biomass: 0.01 DME: 0.12	Ministry of Energy and Mineral Resources

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	INDICATION OF REDUCTION (million tonne of CO2e)	RESPONSIBLE INSTITUTION
5.	Biogas Utilization	The construction of 10,000 units of biogas are performed	2010-2014	All provinces	0.04	Ministry of Energy and Mineral Resources
		The construction of 21,400 units of biogas are performed	2015-2020	All provinces	0.09	Ministry of Energy and Mineral Resources
6.	Use of natural gas as city public transportation fuel	A 29.33 Million Metric Standard Cubic Feet per Day (MMSCFD) of natural gas is used as fuel by city public transportation in 3 cities and a 10.58 ton/day of Liquid Gas for Vehicle (LGV) is used during 2 years (2013/2014) as city public transportation fuel particularly in Denpasar	2010-2014	3 cities: Palembang, Surabaya, Denpasar	0.13	Ministry of Energy and Mineral Resources
		A 628.50 MMSCFD of natural gas is used as fuel by city public transportation in 6 cities and a 10.58 ton/day of LGV is used as city public transportation fuel, particularly in Balikpapan	2015-2020	6 cities: Medan, Jabodetabek, Cilegon, Cirebon, Balikpapan and Sengkang	2.94	Ministry of Energy and Mineral Resources

7. Enhancement.....

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	INDICATION OF REDUCTION (million tonne of CO <sub>2</sub> e)	RESPONSIBLE INSTITUTION
7.	Enhancement of the pipe connection of natural gas to houses	Increase the utilization of gas which used by household to 94,500 home connections	2010-2014	24 locations: Lhokseumawe, Pekanbaru, Prabumulih, Palembang, Muara Enim, Lampung, Rusun bersubsidi Jabodetabek, Subang, Bekasi, Bogor, Depok, Semarang, Surabaya, Bangkalan, Sidoarjo, Sidoarjo Tambak Mendaeng, Sidoarjo Kalidawir, Sengkang, Bontang, Balikpapan, Tarakan, Samarinda and Sorong	0.15	Ministry of Energy and Mineral Resources
8.	Construction of Liquid Petroleum Gas (LPG) mini plants	The construction of a unit of 2.2 MMSCFD (supply) LPG mini plant is performed	2010-2014	Musi Banyuasin, Sumatra Selatan	0.03	Ministry of Energy and Mineral Resources
9.	Post-mining land reclamation	The planting of trees on an area of 31,400 ha	2010-2014	All provinces	1.18	Ministry of Energy and Mineral Resources
		The planting of trees on an area of 41,100 ha	2015-2020	All provinces	1.55	Ministry of Energy and Mineral Resources



NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	INDICATION OF REDUCTION (million tonne of CO <sub>2</sub> e)	RESPONSIBLE INSTITUTION
10.	Development of Intelligent Transport System (ITS)	13 packages of ITS are developed to: <ul style="list-style-type: none"> <li>• reduce traffic jam level by intersection coordination</li> <li>• enhance coordination between intersections</li> <li>• Provide a bus priority system at intersections</li> <li>• Shift from private to mass transportation</li> </ul>	2010-2020	Jabodetabek: Jakarta, Bogor, Depok, Tangerang, Bekasi  12 cities : Medan, Padang, Pekanbaru, Palembang, Bandung, Semarang, Yogyakarta, Surabaya, Denpasar, Makassar, Balikpapan and Banjarmasin	1.77, made up of: <ul style="list-style-type: none"> <li>• Jabodetabek: 0.71</li> <li>• 1.06, made up of: <ul style="list-style-type: none"> <li>- Metropolitan Cities (MP): 0.79</li> <li>- Big Cities (BC): 0.27</li> </ul> </li> </ul>	Ministry of Transportation
11.	Application of a Traffic Impact Control (TIC)	12 packages of Traffic Impact Control are applied	2010-2020	12 cities: Medan, Padang, Pekanbaru, Palembang, Bandung, Semarang, Yogyakarta, Surabaya, Denpasar, Makassar, Balikpapan and Banjarmasin	0.24	Ministry of Transportation
12.	Application of parking management	The application of parking management in 12 cities to: <ul style="list-style-type: none"> <li>• Reduce mode share in downtown</li> <li>• Reduce private car use</li> </ul>	2010-2010	12 cities: Medan, Padang, Pekanbaru, Palembang, Bandung, Semarang, Yogyakarta, Surabaya, Denpasar, Makassar, Balikpapan and Banjarmasin	1.07	Ministry of Transportation

13. Application.....

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	INDICATION OF REDUCTION (million tonne of CO <sub>2</sub> e)	RESPONSIBLE INSTITUTION
13.	Application of Congestion Charging and Road Pricing (combined with mass rapid transport)	The application of Congestion Charging and Road Pricing in 2 cities to: <ul style="list-style-type: none"> <li>• reduce car mode share in downtown</li> <li>• Reduce congestions in traffic-limited areas</li> </ul>	2010-2020	2 cities: Jakarta and Surabaya	0.41	Ministry of Transportation  Ministry of Finance
14.	Reformation of transit system – Bus Rapid Transit (BRT) / semi BRT	The supply and distribution of 43 BRTs/year in 12 cities are performed	2010-2020	12 cities: Medan, Padang, Pekanbaru, Palembang, Bandung, Semarang, Yogyakarta, Surabaya, Denpasar, Makassar, Balikpapan and Banjarmasin	0.69, made up of: MC = 0.51 BC = 0.18	Ministry of Transportation
15.	Rejuvenation of public transport fleets	Rejuvenation with 6,000 units of public transport fleets based on low emission design are performed	2010-2020	12 cities: Medan, Padang, Pekanbaru, Palembang, Bandung, Semarang, Yogyakarta, Surabaya, Denpasar, Makassar, Balikpapan and Banjarmasin	0.36	Ministry of Transportation
16.	Installation of Converter Kit (public transport gasification)	Installation of converter kit on 1,000 units of gasoline-fuelled taxi and public transportation per year to reduce CO <sub>2</sub> up to 25% is performed.	2010-2020	Nine cities: Medan, Palembang, Jabodetabek, Cilegon, Cirebon, Surabaya, Denpasar, Balikpapan and Sengkang	0.04	Ministry of Transportation
17.	Smart driving (eco-driving) training and socialization	Smart driving training and socialization for 50,000 persons/year are performed	2010-2020	12 cities: Medan, Padang, Pekanbaru, Palembang, Bandung, Semarang, Yogyakarta, Surabaya, Denpasar, Makassar, Balikpapan and Banjarmasin	0.002	Ministry of Transportation

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	INDICATION OF REDUCTION (million tonne of CO <sub>2</sub> e)	RESPONSIBLE INSTITUTION
18.	Building of Non-Motorized Transport (Pedestrian and bicycle lines)	Non-Motorized Transport is built in 12 cities	2010-2020	12 cities: Medan, Padang, Pekanbaru, Palembang, Bandung, Semarang, Yogyakarta, Surabaya, Denpasar, Makassar, Balikpapan and Banjarmasin	0.21	Ministry of Transportation
19.	Development of Bandung's city railways	Develop Bandung's city railway of 42 km (double track and electrification)	2010-2020	West Java Province: Padalarang – Bandung - Cicalengka	4.56	Ministry of Transportation
20.	Construction of double-double track (including electrification)	Construct a double-double track of 35 km	2010-2014	DKI Jakarta Province: Manggarai - Cikarang	21.21	Ministry of Transportation
21.	Procurement of new Electric Rail Car (KRL)	New KRLs are procured as many as: <ul style="list-style-type: none"> <li>• 1,024 units to serve the Jabodetabke's 890 km;</li> <li>• 640 units to serve the East Java's 410 km; and</li> <li>• 256 units to serve the West Java's 150 km</li> </ul>	2010-2030	3 provinces: DKI Jakarta, West Java and East Java	Emission reduced by: <ul style="list-style-type: none"> <li>• Jabodetabek = 0.002/year</li> <li>• East Java = 0.001/year</li> <li>• West Java = 0.0005/year</li> </ul>	Ministry of Transportation
22.	Modification of Diesel Rail Train (KDR) into Electric Diesel Rail Train (KRDE)	25 units of KRD are modified into KRDE with predicted reduction of fuel consumption 198 liter per km	2010-2011	DKI Jakarta Province	0.00005	Ministry of Transportation



NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	INDICATION OF REDUCTION (million tonne of CO2e)	RESPONSIBLE INSTITUTION
23.	Construction of North-South Mass Rapid Transport (MRT) Phase I and Phase II	The construction of MRT Phase I 14.1 km and Phase II 8.2 km are performed	2010-2020	DKI Jakarta Province: <ul style="list-style-type: none"> <li>• Lebak Bulus – Bundaran HI (Phase I)</li> <li>• Bundaran HI – Kampung Bandan (Phase II)</li> </ul>	2.77/year	Ministry of Transportation DKI Jakarta Provincial Government
24.	Construction of Soekarno Hatta Airport railway track	The construction of Soekarno Hatta Airport railway track of 33 km is performed	2010-2020	2 provinces: DKI Jakarta and Banten, made up of: <ul style="list-style-type: none"> <li>• Express line; Manggarai, andara Soekarno Hatta via Pluit</li> <li>• Commuter line: via Tangerang line from Tanah Tinggi Station</li> </ul>	0.19/year	Ministry of Transportation
25.	Construction of Jakarta monorail	The construction of Jakarta monorail, 12.2 km for Blue Line and 14.8 km for Green Line is performed	2010-2020	DKI Jakarta Province	0.52/year	Ministry of Transportation DKI Jakarta Provincial Government
26.	Road construction / improvement and preservation	Enhancement of the capacity of the 19,370 km national road and preservation of the national road of 168,999 km	2010-2014	All provinces	1.10	Ministry of Transportation

### **INDUSTRIAL SECTOR**

Emission Reduction Target (26%): 0.001 (Giga Tonne) CO<sub>2</sub>e

Emission Reduction Target (41%): 0.005 (Giga Tonne) CO<sub>2</sub>e

Policies taken to support the RAN-GRK:

Increase in Industrial growth by optimizing the use of energy

Strategies:

1. Conduct an energy audit especially on energy-intensive industries
2. Provide incentives in energy efficiency programs

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	INDICATION OF REDUCTION (million tonne of CO2e)	RESPONSIBLE INSTITUTION
1.	Application of process and technology modification	guideline for use of biomass and other technologies in cement industry as blended cement is prepared	2010-2020	9 cement producers in 9 provinces: NAD, West Sumatra, South Sumatra, West Java, Central Java, East Java, NTT, South Sulawesi and South Kalimantan	2.75	Ministry of Industry
2.	Energy conservation and audit	<p>a. Energy management system is set up in 9 cement producers, 35 steel producers and 15 paper pulp producers</p> <p>b. Energy management system is set up in glass and ceramic, fertilizer, petrochemical, food and drink, textile and base chemical producers</p>	<p>2010-2014</p> <p>2015-2020</p>	<ul style="list-style-type: none"> <li>• 9 cement producers in 9 provinces: NAD, West Sumatra, South Sumatra, West Java, Central Java, East Java, NTT, South Sulawesi and South Kalimantan</li> <li>• Steel producers in 12 provinces: North Sumatra, South Sumatra, Riau, Jambi, Banten, DKI, West Java, Central Java, East Java, West Kalimantan, South Kalimantan and South Sulawesi</li> <li>• 15 paper pulp producers</li> </ul> <p>8 provinces: North Sumatra, Banten, West Java, Central Java, East Java, DKI Jakarta, East Kalimantan and South Sulawesi</p>	<p>2.06, made up of:</p> <ul style="list-style-type: none"> <li>• Cement: 0.04</li> <li>• Steel: 0.64</li> <li>• Paper pulp: 0.38</li> </ul> <p>2.75</p>	Ministry of Industry
3.	Elimination of Ozone Depleting Substances (ODS)	Elimination of ODS in 4 sectors (refrigerant, foam, chiller and fire extinguisher)	2010-2020	10 provinces: North Sumatra, South Sumatra, Riau, West Sumatra, DKI Jakarta, Banten, West Java, Central Java, East Java, Yogyakarta	1.50	Ministry of Industry

### **WASTE MANAGEMENT SECTOR**

Emission Reduction Target (26%); 0.048 (Giga Tonne) CO<sub>2</sub>e

Emission Reduction Target (41%); 0.078 (Giga Tonne) CO<sub>2</sub>e

Policies taken to support the RAN-GRK:

Enhancing domestic solid waste and waste water management

Strategies:

1. Enhancement of institutional capacity and regional regulations (Perda)
2. Enhancement of waste water management in urban
3. Reduction of the heaps of wastes through 3R (reduce, reuse, recycle)
4. Improvement of the waste management process at the Final Treatment Facility (FTF)
5. Improvement/construction/rehabilitation of FTFs
6. Utilization of waste/ solid waste into environmentally friendly energy products



NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	INDICATION OF REDUCTION (million tonne of CO <sub>2</sub> e)	RESPONSIBLE INSTITUTION
1.	Development on off-site and on-site systems of waste water facilities and infrastructures	<p>a. Centralized city-scale (off-site) waste water management system is available in 16 regencies/cities</p> <p>b. On-site waste water management system is available in 11,000 locations</p>	2010-2020	<p>16 cities, made up of:</p> <ul style="list-style-type: none"> <li>• Development: Medan, Jakarta, Tangerang, Bandung, Cirebon, Yogyakarta, Surakarta, Denpasar, Banjarmasin and Balikpapan</li> <li>• New construction: Batam, Palembang, Semarang, Surabaya, Malang, and Makassar</li> </ul> <p>All provinces</p>	2.0	Ministry of Public Works

2. Construction....

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	INDICATION OF REDUCTION (million tonne of CO <sub>2</sub> e)	RESPONSIBLE INSTITUTION
2.	Construction of Final Treatment Facility (FTF) and maintenance of an integrated waste management (Reduce, Reuse, Recycle (3R))	<p>a. The management of FTF in 210 locations is improved</p> <p>b. Waste management through 3R integrated waste management program in 250 locations is improved</p>	2010-2020	<ul style="list-style-type: none"> <li>• Sumatra Island, 62 locations: NAD (9), North Sumatra (9), West Sumatra (6), Riau (4), Riau Islands (3), Jambi (4), Bengkulu (6), South Sumatra (7), Bangka Belitung (7), Lampung (7)</li> <li>• Java Island, 55 locations: Banten (5), Jakarta (1), West Java (12), Central Java (18), Yogyakarta (4), East Java (15)</li> <li>• Kalimantan Island, 29 locations: West Kalimantan (6), Central Kalimantan (4), South Kalimantan (10), East Kalimantan (9)</li> <li>• Sulawesi Island, 28 locations: North Sulawesi (7), Gorontalo (3), Central Sulawesi (4), South Sulawesi (7), West Sulawesi (3), North Sulawesi (4)</li> <li>• Bali and Nusa Tenggara Islands, 20 locations: Bali (7), NTB (8), NTT (5)</li> </ul>	46.0	Ministry of Public Works

• Eastern Indonesia Islands.....

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	INDICATION OF REDUCTION (million tonne of CO2e)	RESPONSIBLE INSTITUTION
				<ul style="list-style-type: none"><li>Eastern Indonesia Islands, 16 locations: Maluku (4), North Maluku (4), Papua (4), West Papua (4)</li></ul>		

PRESIDENT OF THE REPUBLIC OF INDONESIA,

[Signed]

DR. H. SUSILO BAMBANG YUDHOYONO

True copy of the original  
SECRETARIAT OF THE CABINET OF RI  
Deputy of Economic Affairs,

[Signed]

Retno Pudji Budi Astuti

ATTACHMENT II  
 PRESIDENTIAL REGULATION OF THE REPUBLIC OF INDONESIA  
 NUMBER : 61 YEAR 2011  
 DATE : 20 SEPTEMBER 2011

**SUPPORTING ACTIVITIES OF  
 NATIONAL ACTION PLAN FOR GREENHOUSE GAS EMISSIONS REDUCTION**

**I. AGRICULTURAL SECTOR**

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	RESPONSIBLE INSTITUTION
1.	Research on water management systems in irrigation areas	<ul style="list-style-type: none"> <li>Water management systems are available in irrigation areas</li> <li>Prototypes for water management systems are available in irrigation areas in pilot locations</li> <li>Evaluation on the prototypes for water management systems in irrigation areas is made</li> <li>Standard/guideline of water management in the irrigation areas are prepared</li> </ul>	2010-2014	Province of West Java	Ministry of Public Works

2. Research.....



NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	RESPONSIBLE INSTITUTION
2.	Research on GHG emissions reduction methods in Reservoirs	<ul style="list-style-type: none"> <li>• GHG emissions level in Reservoirs are available</li> <li>• Methods for GHG emissions reduction are available</li> <li>• Trials for GHG emissions reduction methods are done</li> <li>• Guideline for GHG emissions reduction methods in Reservoirs is formulated</li> </ul>	2010-2014	3 provinces: West Java, Central Java and East Java	Ministry of Public Works
3.	Research and Development on low emission technology, Methodology for Measurable, Reportable, Verifiable (MRV) in agricultural sector (non-peat)	Low GHG emission technology which is easy to apply and produces high yields is formulated and MRV methodology is provided for agricultural sector, applied in 12 packages of food crops, 12 packages of livestock, 8 packages of plantation plants and 2 activities related with MRV in agricultural sector	2011-2014	All provinces except DKI Jakarta	Ministry of Agriculture
4.	Implementation of land clearing without burning	Land clearing without burning is done through making composts, charcoals, charcoal briquettes, on an area of 1,800 ha	2010-2020	7 provinces: Riau, North Sumatra, Jambi, West Sumatra, East Kalimantan, Central Kalimantan and West Kalimantan	Ministry of Environment

## II. FORESTRY AND PEAT LAND SECTOR

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	RESPONSIBLE INSTITUTION
1.	Survey and data collection on hydrology and geo-hydrology of peat lands	Reports on the results of hydrologic and geologic survey and data collection on peat lands in 5 provinces are prepared	2010-2014	5 provinces: Riau, Jambi, West Kalimantan, Central Kalimantan and South Kalimantan	Ministry of Public Works
2.	Identification of marsh lands for cultivation and conservation	Marsh lands for cultivation and conservation are identified	2010-2014	5 provinces: West Sumatra, Riau, Jambi, South Kalimantan and Central Kalimantan	Ministry of PPN/Bappenas Ministry of Public Works
3.	Research on water system in peat lands	<ul style="list-style-type: none"> <li>• Peat land water systems are available</li> <li>• Prototypes for peat land water systems are available</li> <li>• Evaluation on prototypes for peat land water systems is done</li> <li>• Standard/guideline for peat land water system is formulated</li> </ul>	2010-2014	2 islands: Kalimantan and Sumatra	Ministry of Public Works
4.	Formulation of Presidential Regulations on National Strategic Zones (NSZ) and island Spatial Planning (SP)	69 Presidential Regulations (Perpres) on NSZ and 7 islands SPs are drafted	2010-2014	7 islands: Sumatera, Java-Bali, Kalimantan, Sulawesi, Nusa Tenggara, Maluku and Papua	Ministry of Public Works
5.	Formulation of river Regional Spatial Planning (RSP)	69 rivers RSPs are formulated	2010-2014	All provinces	Ministry of Public Works

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	RESPONSIBLE INSTITUTION
6.	Provincial region spatial audit (stock taking)	18 activities of stock takings are done	2010-2014	All provinces	Ministry of Public Works
7.	Spatial planning data and information gathering	22 activities of spatial planning data and information gathering are implemented	2010-2014	All provinces	Ministry of Public Works
8.	Monitoring the evaluation of national and island RSPs and national infrastructure programs	26 activities of evaluation monitoring of national and island RSPs and national infrastructure programs are performed	2010-2014	National	Ministry of Public Works
9.	Acceleration of the stipulation of Regional Regulation (Perda) on Province and Regency / City RSPs based on Strategic Environmental Assessment (SEA)	Drafting of 31 Perdas on Province RSPs and 497 Perdas on Regency/City RSPs is facilitated	2010-2014	31 provinces and 497 Regencies/Cities	Ministry of Public Works
10.	Control the non-forestry related uses of forest areas	Forest Area Borrow-Use Licenses are served 100% on time	2010-2014	All provinces	Ministry of Forestry
		At least 80% annually of the target to require orderly payment of Non-Tax State Revenues (PNBP) from Forest Area Uses is achieved	2010-2014	All provinces	Ministry of Forestry
		Data and information on the use of forest areas in 33 provinces are available	2010-2014	All provinces	Ministry of Forestry
		Legislations on the Use of Forest Areas are available	2010-2014	National	Ministry of Forestry



NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	RESPONSIBLE INSTITUTION
11.	Forest Resources (FRs) Inventory and Monitoring	Up-to-date national data and information on basic geo-spatial and forestry thematic are available	2010-2014	National	Ministry of Forestry
		Data and information on national forest area carbon estimation are available, to calculate the forest carbon per year (updated 5 times)	2010-2014	National	Ministry of Forestry
		Integrated FR spatial database is available, updated 5 times	2010-2014	National	Ministry of Forestry
12.	Research and development on Forestry climate change policy	Basic and applied sciences and technologies are produced in the field of forest climate change policy	2010-2014	National	Ministry of Forestry
13.	Formulation of the Standard Criteria of Peat Ecosystem Damage	Standard criteria of peat dome protected area and peat cultivation area damages are formulated	2010-2014	National	Ministry of Environment
14.	Formulation of the Master Plan of Province Peat Ecosystem Management	Master Plan of Province Peat Ecosystem Management is formulated in 10 provinces	2010-2015	10 provinces: North Sumatra, Riau, Jambi, West Sumatra, Central Kalimantan, West Kalimantan, South Kalimantan, East Kalimantan, Papua and West Papua	Ministry of Environment
15.	Inventory and mapping of peat ecosystem's hydrological entity	<ul style="list-style-type: none"> <li>Documented data and information on the peat ecosystem's hydrological entity are available</li> <li>Peat Hydrological Entity Map is prepared, with scale at least 1:250,000 for an area of 20 million ha</li> </ul>	2010-2014	10 provinces: North Sumatra, Riau, Jambi, West Sumatra, Central Kalimantan, West Kalimantan, South Kalimantan, East Kalimantan, Papua and West Papua	Ministry of Environment



NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	RESPONSIBLE INSTITUTION
16.	Inventory and mapping of peat ecosystem characteristics	<ul style="list-style-type: none"> <li>• Documented data and information on the characteristics of peat ecosystem are available</li> <li>• Peat Characteristic Map of scale 1:100,000 is prepared for an area of 20 million ha</li> </ul>	2010-2014	10 provinces: North Sumatra, Riau, Jambi, West Sumatra, Central Kalimantan, West Kalimantan, South Kalimantan, East Kalimantan, Papua and West Papua	Ministry of Environment
17.	Research and development on Low emission technology , MRV methodology on agricultural areas in peat land	Research and development of 12 packages of low emission technology, MRV methodology on agricultural areas in peat land are performed	2011-2014	11 provinces: NAD, North Sumatra, Riau, Jambi, West Sumatra, Lampung, West Kalimantan, South Kalimantan, East Kalimantan, Central Kalimantan and Papua	Ministry of Agriculture

### III. ENERGY AND TRANSPORTATION SECTOR

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	RESPONSIBLE INSTITUTION
1.	Monitoring of natural gas supply for upstream consumers and preparation of recommendations for natural gas allocations	5 packages of natural gas supplies are monitored	2010-2014	6 islands: Java, Sumatra, Sulawesi, Kalimantan, Maluku and Papua	Ministry of Energy and Mineral Resources
		5 packages of natural gas supplies are monitored	2015-2020	6 islands: Java, Sumatera, Sulawesi, Kalimantan, Maluku and Papua	Ministry of Energy and Mineral Resources
2.	Monitoring of the implementation of the policy on reducing the volume of flare gas burning	Data on the annual volume of flare gas burning from the result of monitoring on the implementation of the flare gas burning volume reduction policy is available	2010-2014	Throughout Indonesia	Ministry of Energy and Mineral Resources
3.	Provision and management of new renewable energy and energy conservation	<ul style="list-style-type: none"> <li>• Technical Guidance on New Renewable Energy (NRE) is performed to 900 persons</li> <li>• Technical Guidance on Energy conservation is performed to 850 persons</li> <li>• 5 reports of marine energy feasibility studies are prepared</li> <li>• 10 reports of marine-based power plant pilot projects are prepared</li> <li>• 5 reports of home uses of biomass utilization are prepared</li> </ul>	2010-2014	Throughout Indonesia	Ministry of Energy and Mineral Resources

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	RESPONSIBLE INSTITUTION
4.	Setting up of geothermal and groundwater regulations	50 geothermal and groundwater regulations are set up	2010-2014	All provinces	Ministry of Energy and Mineral Resources
		20 geothermal and groundwater regulations are set up	2015-2020	All provinces	Ministry of Energy and Mineral Resources
5.	Preparation of the data classification of geothermal potential and reserve for electricity and direct use of geothermal energy	Geothermal potential and reserve data for electricity and direct use of geothermal energy is available	2010-2014	All provinces	Ministry of Energy and Mineral Resources
6.	Establishment of geothermal Mining Work Areas (MWAs)	30 Geothermal Mining Work Areas are established	2010-2014	5 islands: Java, Sumatera, Sulawesi, Nusa Tenggara and Maluku	Ministry of Energy and Mineral Resources
		20 Geothermal Mining Work Areas are established	2015-2020	5 islands: Java, Sumatera, Sulawesi, Nusa Tenggara and Maluku	Ministry of Energy and Mineral Resources
7.	Usage of Vegetable Fuel (VF) in total fuel use	Data on the percentage of VF use in total fuel use is available	2010-2020	All provinces	Ministry of Energy and Mineral Resources
8.	Shifting from kerosene to LPG	5 reports of the studies on LPG pricing policy for Public Service Obligation (PSO) and non-PSO are prepared	2010-2020	All provinces	Ministry of Energy and Mineral Resources
9.	Calculation and update of the emission factors in electricity's grid system	Emission factor in 8 interconnection grids is calculated and updated	2010-2020	8 locations: Java-Bali, Kalimantan (3 systems), Sulawesi (2 systems), Batam and Sumatra	Ministry of Energy and Mineral Resources



NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	RESPONSIBLE INSTITUTION
10.	Research on sea wave and current power plant system	<p>Researches on sea wave power plant system are carried out, which include:</p> <ul style="list-style-type: none"> <li>• Electric modelling</li> <li>• Prototype for sea wave power plant</li> <li>• Prototype evaluation</li> </ul>	2010-2014	Bali Strait	Ministry of Public Works
11.	Testing on all motor vehicles, including private vehicles and motorcycles	<ul style="list-style-type: none"> <li>• Motor Vehicle Test (MVT) is performed in Cities/Regencies that have not had MVT units</li> <li>• Annual checking on all motor vehicles is done so that any vehicle which does not meet the emission limit may not be operated on roads</li> </ul>	2010-2020	All provinces	Ministry of Transportation
12.	Application of CO2 emission standards to passenger cars	CO2 emission standard starting from new cars in Indonesia is applied	2010-2020	All provinces	Ministry of Transportation
13.	Development of modern logistic system	9 packets of modern logistic system (1 year 1 packet) to reduce the travel km figure are implemented	2010-2020	12 cities: Medan, Padang, Pekanbaru, Palembang, Bandung, Semarang, Yogyakarta, Surabaya, Denpasar, Makassar, Balikpapan and Banjarmasin	Ministry of Transportation
14.	Application of Car Labelling	Labelling of new cars by their fuel consumption (per 100 km) and CO2 emission (in g/k) is applied	2010-2020	All provinces	Ministry of Transportation
15.	Limitation on the speed on toll roads	Speed limit is applied in all toll roads in order to reduce emission by 0.07 Million Tonnes of CO2e	2010-2014	All toll roads	Ministry of Transportation

16. Application of.....



<b>NO</b>	<b>ACTION PLAN</b>	<b>ACTIVITY/OBJECTIVE</b>	<b>PERIOD</b>	<b>LOCATION</b>	<b>RESPONSIBLE INSTITUTION</b>
16.	Application of vehicle tax by level of CO2 emissions	Vehicle tax on private vehicles is applied (by level of CO2 emission) every 5 years, to be used for public transportation system development purposes	2010-2014	All provinces	Ministry of Finance
17.	Tree planting	Tree planting as long as 10,000 km	2010-2014	National roads throughout Indonesia, particularly urban roads	Ministry of Public Works

IV. INDUSTRIAL SECTOR.....

#### IV. INDUSTRIAL SECTOR

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	RESPONSIBLE INSTITUTION
1.	Formulation of technical policies to reduce CO2 emissions in cement and steel industries	Technical policies to reduce CO2 emissions in industrial sector, namely cement and steel are formulated	2010-2020	<ul style="list-style-type: none"> <li>• 9 cement producers in 9 provinces: NAD, West Sumatra, West Sumatra, West Java, Central Java, East Java, NTT, South Sulawesi and South Kalimantan</li> <li>• Steel producers in 8 provinces: North Sumatra, West Sumatra, DKI Jakarta, West Java, Banten, West Kalimantan, South Kalimantan and South Sulawesi</li> </ul>	Ministry of Industry
2.	Facilitation and incentive for the development of low carbon and environmentally friendly technology in cement and steel industries	Low carbon technology facilitation and incentive policies in 25 producers, namely 9 cement producers and 16 steel producers, are formulated	2010-2020	<ul style="list-style-type: none"> <li>• 9 cement producers in 9 provinces: NAD, West Sumatra, West Sumatra, West Java, Central Java, East Java, NTT, South Sulawesi and South Kalimantan</li> <li>• Steel producers in 8 provinces: North Sumatra, West Sumatra, DKI Jakarta, West Java, Banten, West Kalimantan, South Kalimantan and South Sulawesi</li> </ul>	Ministry of Industry

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	RESPONSIBLE INSTITUTION
3.	Formulation and development of "Green Industry" roadmap and its implementation	Green Industry Roadmap policy is formulated and implemented in 5 industrial estates and 8 industrial sectors	2010-2020	5 islands: Sumatera, Java, Kalimantan, Sulawesi and Nusa Tenggara	Ministry of Industry
4.	Enhancement on capacity building for government officers and industrialists	capacity building of government officers and industrialists in Climate Change through trainings in 5 islands are enhanced	2010-2014	2 islands: Sumatra and Java	Ministry of Industry
			2015-2020	3 islands: Kalimantan, Sulawesi and Nusa Tenggara	Ministry of Industry
5.	Implementation of the Standard of EURO IV to new motor vehicles	EURO IV Vehicle Standard is implemented to 1 sub-sector of transportation industry to reduce emission by 5%	2010-2014	4 provinces: DKI Jakarta, West Java, Central Java and East Java	Ministry of Industry
			2015-2020	3 provinces: North Sumatra, Banten and South Sulawesi	Ministry of Industry
6.	CO2 emissions potential inventory in industrial sector	Database and CO2 emissions reduction inventory in 8 industrial sectors (pulp and paper, glass and ceramic, fertilizer, petrochemical, food and drink, textile, base chemical and non-steel metal) is formulated	2010-2020	5 islands: Sumatera, Java, Kalimantan, Sulawesi and Maluku	Ministry of Industry
7.	Monitoring and evaluation of mitigation programs	Monitoring and evaluation of mitigation programs for 12 industries (cement, steel, pulp and paper, glass and ceramic, fertilizer, petrochemical, food and drink, textile, non-steel metal, transportation, chemical and electronic) are conducted on 50 companies	2020-2020	6 islands: Sumatera, Java, Kalimantan, Sulawesi, Nusa Tenggara and Maluku	Ministry of Industry

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	RESPONSIBLE INSTITUTION
8.	Application of the International Organization for Standardization (ISO) 50001 on energy conservation and monitoring of energy management implementation in industrial sector	Energy management is implemented and energy auditors is set up in 9 industrial sectors (pulp and paper, glass and ceramic, fertilizer, petrochemical, food and drink, textile, non-steel metal, transportation, base chemical and electronic)	2020-2020	6 islands: Sumatera, Java, Kalimantan, Sulawesi, Nusa Tenggara and Maluku	Ministry of Industry
9.	Formulation of CO2 Emissions Roadmap in industrial sector	Roadmaps of CO2 emissions reduction in 8 industrial sectors (pulp and paper, glass and ceramic, fertilizer, petrochemical, food and drink, textile, base chemical, non-steel metal, transportation, chemical and electronic) are formulated	2020-2020	6 islands: Sumatera, Java, Kalimantan, Sulawesi, Nusa Tenggara and Maluku	Ministry of Industry

V. WASTE MANAGEMENT SECTOR.....



## V. WASTE MANAGEMENT SECTOR

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	RESPONSIBLE INSTITUTION
1.	Implementation of GHG inventory	GHG inventory for waste management is conducted in 372 cities during 5 years	2010-2014	11 metropolitan cities, 12 big cities, 72 medium cities, 277 small cities	Ministry of Environment
2.	Monitoring of the open burning of waste	Waste open burning activities in 372 cities are monitored	2010-2020	11 metropolitan cities, 12 big cities, 72 medium cities, 277 small cities	Ministry of Environment
3.	Capacity building in waste management	<ul style="list-style-type: none"> <li>• Formulation of Norms, Standards, Procedures and Criteria (NSPC) for waste management in 30 regencies/cities</li> <li>• Assistance in the formulation of City/Regency Sanitation Strategies (CSS) in relation to waste management in 150 regencies/cities</li> <li>• Institutional building (organization, human resources, community's role) in 150 regencies/cities</li> <li>• Facilitation in the development of sources for financing and developing waste investment pattern in 15 regencies/cities</li> </ul>	2010-2014	150 regencies/cities	Ministry of Public Works
4.	Utilization of waste generated from land clearing as materials for making composts, charcoals and charcoal briquettes	Production of composts, charcoals and charcoal briquettes in 3 provinces, covering an area of 1800 ha	2010-2020	3 provinces: Jambi, West Sumatra and East Kalimantan	Ministry of Environment

VI. OTHER SECTORS.....

**VI. OTHER SECTORS OF SUPPORTING ACTIVITIES**

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	RESPONSIBLE INSTITUTION
<b>A. AGENCY FOR METEOROLOGY AND GEOPHYSICS (BMKG)</b>					
1.	Construction of Global Atmospheric Watch (GAW) stations	GAW stations are constructed in 2 stations/locations to measure the ambient level of CO2 content in Indonesia's atmospheric area	2010-2014	2 provinces: Central Sulawesi and Papua	Agency for Meteorology, Climatology and Geophysics
2.	Construction of Air Quality Early Warning Information System for fire hazard information	Air Quality Early Warning Information System are constructed in 8 locations/cities to monitor air quality in forest fire-prone areas	2010-2014	8 cities: Medan, Pekanbaru, Jambi, Palembang, Palangkaraya, Pontianak, Banjarmasin and Balikpapan	Agency for Meteorology, Climatology and Geophysics
3.	Climate Early Warning System (CEWS)	16 packages of CEWS for early warning of El Nino and La Nina as forest fire early warning are constructed	2010-2014	All provinces	Agency for Meteorology, Climatology and Geophysics
4.	Development of a Fire Danger Rating System (FDRS)	FDRS packages for measurement of fire levels from weather information for daily early warning of forest fire are developed		All provinces	Agency for Meteorology, Climatology and Geophysics

B. MINISTRY OF ENVIRONMENT.....

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	RESPONSIBLE INSTITUTION
<b>B. MINISTRY OF ENVIRONMENT</b>					
1.	Towards Green Indonesia	Identification of Indonesia's land cover areas and establishment of areas with good land cover are conducted	2010-2020	All provinces	Ministry of Environment
2.	Environmental Governance Management	a package of environmental governance policy on ecosystem mapping for environmental planning is formulated	2010-2020	All provinces	Ministry of Environment
3.	National GHG Inventory System ( <i>SIGN</i> )	a National GHG inventory system is formulated	2010-2020	All provinces	Ministry of Environment
4.	Sustainable peat ecosystem management	Mapping of peat hydrological entity and peat characteristic inventory on peat land areas of 15 million ha are conducted	2010-2020	7 provinces: Riau, Jambi, West Sumatra, West Kalimantan, Central Kalimantan, and South Kalimantan	Ministry of Environment
		Sustainable aquaculture development in peat lands of 4,000 ha is realized	2010-2020	4 provinces: Jambi, Riau, Central Kalimantan and West Kalimantan	Ministry of Environment
<b>C. MINISTRY OF MARITIME AFFAIRS AND FISHERIES</b>					
1.	Marine Carbon Researches in Indonesia	5 marine research packages in Indonesia are conducted	2010-2014	Indonesia's Coastal and Coral Triangle Initiatives (CTI) regions	Ministry of Maritime Affairs and Fisheries
2.	Study on Marine Hazard Response to Climate Change in SEA Region	2 research packages of Hazard Response to Climate Change in SEA Region are conducted	2010-2012	South China Sea and Karimata Strait	Ministry of Maritime Affairs and Fisheries

3. Implementation.....



NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	RESPONSIBLE INSTITUTION
3.	Implementation of the Indonesia Global Ocean Observing System (INAGOOS)	2 packages of Indonesia Global Ocean Observing System (INAGOOS) activities are conducted	2010-2014	Jakarta, Bali and Indonesia's Waters	Ministry of Maritime Affairs and Fisheries
4.	Implementation of the Indo-China Ocean and Climate Research Centre	Researches in 3 locations related to Indo-China and Climate Research Centre are conducted	2010-2014	Sunda Strait, Indian Ocean and Karimata Strait	Ministry of Maritime Affairs and Fisheries
5.	Formulation of the Master Plan (Detailed Zoning Plan) for <i>minapolitan</i> regions and National/ trans provincial / regency / city region Zoning Plan	100 Master Plans (Detailed Zoning Plans) for <i>minapolitan</i> regions and 300 National/ trans province / regency / city region Zoning Plans are formulated	2010-2020	50 <i>minapolitan</i> regions, 145 trans province/regency/city regions	Ministry of Maritime Affairs and Fisheries
6.	Coastal ecosystem rehabilitation (mangrove, coastal vegetation, sea grass, coral reef) in coastal regions	300 thousand ha of Coastal ecosystem are rehabilitated	2010-2020	Marine and fishery production centres	Ministry of Maritime Affairs and Fisheries
7.	Water Conservation Area Management	9 million ha of water conservation area are managed	2010-2020	12 areas/regions: Riau, Padang, Kupang, Makasar, Sorong, Jakarta, Serang, Bali, Mataram (North Lombok), Pontianak Banda (Central Maluku), Aru Tenggara, Pangkajene kepulauan, Biak, Raja Ampat; and 45 regencies/cities of water conservation areas	Ministry of Maritime Affairs and Fisheries



NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	RESPONSIBLE INSTITUTION
8.	Rehabilitation in Water Conservation Areas	9 million ha of water conservation areas are rehabilitated	2010-2020	23 regions: West Sumatra, Mentawai, North Sumatra-Sumatra, West/North Nias, Central Tapanuli, South Nias, Riau Islands, Bintan, Batam, Lingga, Natuna, South Sulawesi, Pangkajene Islands, Selayar, South East Sulawesi, Buton, Wakatobi, NTT, Sikka, West West Papua, Raja Ampat, Papua and Biak	Ministry of Maritime Affairs and Fisheries
<b>D. CROSS-SECTORAL</b>					
1.	Formulation of the Nationally Appropriate Mitigation Actions (NAMAs)	1 comprehensive concept of NAMAs is formulated	2010-2014	National	Ministry of PPN/Bappenas in coordination with relevant ministries / agencies
2.	Formulation of Low Carbon Development Strategy (Green Economic)	1 package of Climate Change Mitigation and Adaptation Policy is formulated	2010-2014	National	Ministry of PPN/Bappenas in coordination with relevant ministries / agencies
3.	Formulation of National Strategy for Emissions Reduction from Deforestation and Forest Degradation (REDD+)	REDD+ National Strategy is formulated	2010-2011	National	UKP4, Coordinating Ministry for Economic Affairs, Ministry of PPN/Bappenas, Ministry of Forestry

4. Establishment.....

NO	ACTION PLAN	ACTIVITY/OBJECTIVE	PERIOD	LOCATION	RESPONSIBLE INSTITUTION
4.	Establishment of REDD+ National Coordination Agency	REDD+ National Coordination Agency is established	2010-2011	National	UKP4, Coordinating Ministry for Economic Affair, Ministry of State Apparatuses Utilization and Bureaucratic Reformation
5.	Establishment of independent MRV agency for REDD+	Independent MRV agency for REDD+ is established	2010-2011	National	UKP4, Ministry of Environment, Ministry of Forestry
6.	Establishment of financing instrument for REDD+	a. REDD+ financing scheme is established b. REDD+ financing agency is established	2010-2011	National	Ministry of PPN/Bappenas, Ministry of Finance, UKP4

PRESIDENT OF THE REPUBLIC OF INDONESIA,

[Signed]

DR. H. SUSILO BAMBANG YUDHOYONO

True copy of the original  
SECRETARIAT OF THE CABINET OF RI  
Deputy of Economic Affair,

[Signed]

Retno Pudji Budi Astuti

The image features a decorative design with horizontal bands in shades of teal and light green. On the right side, a large, lush green tree stands on a grassy hill that is shaped like the Earth, symbolizing environmental care and sustainability. The background is a soft, light blue sky with faint clouds.

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

on  
The National Action Plan for  
Greenhouse Gas Emissions Reduction