REGULATION OF THE MINISTER OF ENVIRONMENT/THE ENVIRONMENTAL PROTECTION AGENCY OF THE REPUBLIC OF INDONESIA
NUMBER 23 OF 2025
ON
THE NATIONALLY DETERMINED CONTRIBUTION TARGET

BY THE GRACE OF ALMIGHTY GOD

THE MINISTER OF ENVIRONMENT/HEAD OF THE ENVIRONMENTAL

PROTECTION AGENCY OF THE REPUBLIC OF INDONESIA,

Considering : a. that to implement policies on controlling climate change impacts, such implementation should be carried out through, inter alia, the formulation of the nationally determined contribution target or Nationally Determined Contribution;

b. that based on the considerations as referred to in paragraph a and to implement the provisions of Article 23 paragraph (3) and Article 54 of Presidential Regulation Number 110 of 2025 on the Implementation of Carbon Pricing Instruments and Control Over National Greenhouse Gas Emissions, it is necessary to issue a Regulation of the Minister of Environment/Environmental Protection Agency on the Nationally Determined Contribution Target;

Having regard to : 1. Article 17 paragraph (3) of the 1945 Constitution of the Republic of Indonesia;

2. Law Number 39 of 2008 on State Ministries (State Gazette of the Republic of Indonesia Year 2008 Number 166, Supplement to the State Gazette of the Republic of Indonesia Number 4916) as amended by Law Number 61 of 2024 on Amendment to Law Number 39 of 2008 on State Ministries (State Gazette of the Republic of Indonesia Year 2024 Number 225, Supplement to the State Gazette of the Republic of Indonesia Number 6994);

3. Presidential Regulation Number 110 of 2025 on the Implementation of Carbon Pricing Instruments and Control Over National Greenhouse Gas Emissions (State Gazette of the Republic of Indonesia Year 2025 Number 172);

4. Presidential Regulation Number 182 of 2024 on Ministry of Environment (State Gazette of the Republic of Indonesia Year 2024 Number 378);

5. Presidential Regulation Number 183 of 2024 on Environmental Protection Agency (State Gazette of the Republic of Indonesia Year 2024 Number 379);
6. Regulation of the Minister of Environment/Head of the Environmental Protection Agency Number 1 of 2024 on the Organization and Work Procedure of the Ministry of Environment/Environmental Protection Agency (Official Gazette of the Republic of Indonesia Year 2024 Number 1080) as amended by Regulation of the Minister of Environment/Environmental Protection Agency Number 9 of 2025 on Amendment to Regulation of the Minister of Environment/Head of the Environmental Protection Agency Number 1 of 2024 on the Organization and Work Procedure of the Ministry of Environment/Environmental Protection Agency (Official Gazette of the Republic of Indonesia Year 2025 Number 644);

HEREBY DECIDES:

To issue : REGULATION OF THE MINISTER OF ENVIRONMENT/ENVIRONMENTAL PROTECTION AGENCY ON THE NATIONALLY DETERMINED CONTRIBUTION TARGET.

Article 1

In this Ministerial/Agency Regulation:

1. Nationally Determined Contribution, hereinafter abbreviated to NDC, means the national commitment for handling global Climate Change in order to achieve the goals of the Paris Agreement to the United Nations Framework Convention on Climate Change.
2. Climate Change means a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.
3. Greenhouse Gas, hereinafter abbreviated to GHG, means gases contained in the atmosphere, both natural and anthropogenic, which absorb and re-emit infrared radiation.
4. GHG Emissions means the release of GHG into the atmosphere in a specific area within a specific period of time.
5. Sector means the NDC sector which has activities related to GHG Emissions, not referring to administrative definition or an institution that generally organizes or regulates activities.
6. Sub-Sector means a NDC sub-sector which has a subsector of activities related to GHG Emissions, not referring to administrative definition or an institution that largely organizes or regulates activities.
7. Climate Resilience means the ability to anticipate, prepare for, and respond to the impacts, risks, and vulnerabilities due to Climate Change on the Region and the public’s lives.

8. Climate Change Mitigation means any effort to reduce the risks of Climate Change by reducing GHG emissions from various sources and increasing carbon sequestration or strengthening carbon stock from various sources of emissions.
9. Climate Change Adaptation means any effort to increase the adaptive capacity to climate change, including climate variability and extreme weather, so that the potential damages due to climate change is reduced, opportunities posed by climate change can be identified, and consequences arising from climate change can be solved.
10. Means of Implementation of Climate Change, hereinafter referred to as Means of Implementation, means financing, capacity building, and/or development and transfer of technology to support the implementation of Climate Change Mitigation Action and Climate Change Adaptation Action to achieve the NDC target.
11. Climate Change Mitigation Action means any activity that may reduce GHG Emissions, increase carbon sequestration and/or storage/strengthening of carbon stocks.
12. Climate Change Adaptation Action means any activity to conform to anticipate the real adverse effect to climate change, by developing anticipatory strategies and taking advantage of profitable opportunities.
13. Baseline Business as Usual of GHG Emissions, hereinafter referred to as GHG Emissions Baseline, means an estimate of emissions level and GHG projection in sectors or activities that have been identified within a predetermined time frame without policy intervention and/or mitigation technology.
14. Ministry of Environment, hereinafter referred to as the Ministry, means the ministry administering government affairs in the field of environment.
15. Environmental Protection Agency, hereinafter referred to as the Agency, means a non-ministerial government institution responsible for administering governmental duties in the field of environmental control.
16. Minister means the minister administering government affairs in the field of environmental protection and management.
17. Head means the head administering government duties in the field of environmental protection.

Article 2

The NDC targets include:

a. GHG emissions reduction of 2025 to 2030 amounting to 915 million metric tons CO_2e (nine hundred fifteen million metric tons of carbon dioxide equivalent) or equivalent to 31.89% (thirty-one point eighty nine percent) unconditionally, and 1,240 million metric tons CO_2e (one thousand two hundred forty million metric tons of carbon dioxide equivalent), or 43.20% (forty three point twenty percent) with international support, against the GHG emissions baseline of 2010 in the amount of 1,334 million

metric tons CO_2e (one thousand three hundred thirty four million metric tons of carbon dioxide equivalent); and

b. building national, regional, and community resilience to various risks of climate change conditions or Climate Resilience.

Article 3

(1) The NDC target as referred to in Article 2 subparagraph a include the sectors of:

a. energy:

1. GHG emissions reduction in the amount of 358 million metric tons CO_2e (three hundred fifty-eight million metric tons of carbon dioxide equivalent), from the difference between GHG Emissions Baseline of 1,669 million metric tons CO_2e (one thousand six hundred sixty-nine million metric tons of carbon dioxide equivalent) and 1,311 million metric tons CO_2e (one thousand three hundred eleven million metric tons of carbon dioxide equivalent) unconditionally; and
2. GHG emissions reduction in the amount of 446 million metric tons CO_2e (four hundred forty-six million metric tons of carbon dioxide equivalent), from the difference between GHG Emissions Baseline of 1,669 million metric tons CO_2e (one thousand six hundred sixty-nine million metric tons of carbon dioxide equivalent) and 1,223 million metric tons CO_2e (one thousand two hundred twenty-three million metric tons of carbon dioxide equivalent) with international support;

b. waste:

1. GHG emissions reduction in the amount of 40 million metric tons CO_2e (forty-eight million metric tons of carbon dioxide equivalent), from the difference between GHG Emissions Baseline of 296 million metric tons CO_2e (two hundred ninety-six million metric tons of carbon dioxide equivalent) and 256 million metric tons CO_2e (two hundred fifty-six million metric tons of carbon dioxide equivalent) unconditionally; and
2. GHG emissions reduction in the amount of 43.5 million metric tons CO_2e (forty-three point five million metric tons of carbon dioxide equivalent), from the difference between GHG Emissions Baseline of 296 million metric tons CO_2e (two hundred ninety-six million metric tons of carbon dioxide equivalent) and 253 million metric tons CO_2e (two hundred fifty-three million metric tons of carbon dioxide equivalent) with international support;

c. industrial processes and product use:

1. GHG emissions reduction in the amount of 7 million metric tons CO_2e (seven million metric tons of carbon dioxide equivalent), from the

difference between GHG Emissions Baseline of 69.6 million metric tons CO_2e (sixty-nine point six million metric tons of carbon dioxide equivalent) and 63 million metric tons CO_2e (sixty-three million metric tons of carbon dioxide equivalent) unconditionally; and

2. GHG emissions reduction in the amount of 9 million metric tons CO_2e (nine million metric tons of carbon dioxide equivalent), from the difference between GHG Emissions Baseline of 69.6 million metric tons CO_2e (sixty-nine point six million metric tons of carbon dioxide equivalent) and 61 million metric tons CO_2e (sixty-one million metric tons of carbon dioxide equivalent) with international support;

d. agriculture:
   1. GHG emissions reduction in the amount of 10 million metric tons CO_2e (ten million metric tons of carbon dioxide equivalent), from the difference between GHG Emissions Baseline of 119.66 million metric tons CO_2e (one hundred nineteen point sixty-six million metric tons of carbon dioxide equivalent) and 110 million metric tons CO_2e (one hundred ten million metric tons of carbon dioxide equivalent) unconditionally; and
   2. GHG emissions reduction in the amount of 12 million metric tons CO_2e (twelve million metric tons of carbon dioxide equivalent), from the difference between GHG Emissions Baseline of 119.66 million metric tons CO_2e (one hundred nineteen point sixty-six million metric tons of carbon dioxide equivalent) and 108 million metric tons CO_2e (one hundred eight million metric tons of carbon dioxide equivalent) with international support;

e. forestry:
   1. GHG emissions reduction in the amount of 500 million metric tons CO_2e (five hundred million metric tons of carbon dioxide equivalent), from the difference between GHG Emissions Baseline of 714 million metric tons CO_2e (seven hundred fourteen million metric tons of carbon dioxide equivalent) and 214 million metric tons CO_2e (two hundred fourteen million metric tons of carbon dioxide equivalent) unconditionally; and
   2. GHG emissions reduction in the amount of 729 million metric tons CO_2e (seven hundred twenty-nine million metric tons of carbon dioxide equivalent), from the difference between GHG Emissions Baseline of 714 million metric tons CO_2e (seven hundred fourteen million metric tons of carbon dioxide equivalent) and -15 million metric tons CO_2e (minus fifteen million metric tons of carbon dioxide equivalent) with international support.

(2) The NDC targets in the forestry sector as referred to in paragraph (1) subparagraph e also apply to other land uses.

Article 4

The resilience development target as referred to in Article 2 subparagraph b is carried out in the fields of food, water, energy, health, and ecosystem resilience.

Article 5

(1) The implementation of efforts to achieve NDC target as referred to in Article 2 is carried out through performing:
   a. Climate Change Mitigation; and
   b. Climate Change Adaptation.
(2) The implementation of Climate Change Mitigation and Climate Change Adaptation as referred to in paragraph (1) is supported by Means of Implementation.

Article 6

(1) The fulfillment of target as referred to in Articles 2 and 3 is achieved through Climate Change Mitigation Action and Climate Change Adaptation Action.
(2) The Climate Change Mitigation Action and Climate Change Adaptation Action as referred to in paragraph (1) are listed in the Annex as an integral part of this Ministerial/Agency Regulation.

Article 7

This Ministerial/Agency Regulation shall enter into force on the date of its promulgation.

In order to make this Ministerial/Agency Regulation known to the public, it is hereby ordered that it be promulgated by its publication in the Official Gazette of the Republic of Indonesia.

Issued in Jakarta
on 31 October 2025

MINISTER OF ENVIRONMENT/
HEAD OF THE ENVIRONMENTAL PROTECTION AGENCY
OF THE REPUBLIC OF INDONESIA,

signed

HANIF FAISOL NUROFIQ

Promulgated in Jakarta
on 7 November 2025

DIRECTOR GENERAL
OF LEGISLATION
MINISTRY OF LAW
OF THE REPUBLIC OF INDONESIA,

signed

DHAHANA PUTRA

OFFICIAL GAZETTE OF THE REPUBLIC OF INDONESIA YEAR 2025 NUMBER 916

Prepared and issued as an official translation

Jakarta, 16 November 2026
DIRECTOR GENERAL OF LEGISLATION
FOR THE MINISTER OF LAW
OF THE REPUBLIC OF INDONESIA,

DHAHANA PUTRA

Official Translation Notice:
This English translation is provided for information and reference purposes only. In the event of any discrepancy, inconsistency, or ambiguity between the English version and the Indonesian version, the Indonesian version shall prevail.

ANNEX TO
REGULATION OF THE MINISTER OF ENVIRONMENT/THE ENVIRONMENTAL PROTECTION AGENCY OF THE REPUBLIC OF INDONESIA
NUMBER 23 OF 2025
ON
THE NATIONALLY DETERMINED CONTRIBUTION TARGET

A. Climate Change Mitigation Actions

1. Energy Sector

No.	Mitigation Actions	Baseline Activities	Mitigation Actions, Unconditionally	Mitigation Actions with International Support
Renewable Energy				
	• The addition of New and Renewable Energy (NRE) power plants based on the Electricity Supply Business Plan	No addition of new and renewable energy power plants since 2010	Utilization of NRE for power plant with a Greenhouse Gas (GHG) emission reduction target of 97.01 million metric tons of carbon dioxide equivalent (CO2e)	Unconditionally similar actions with Enhanced Implementation of Government Claim Carbon from Credit Scheme activities in power plants, with a GHG emission reduction target of 88.00 million metric tons of CO2e
	• Biofuels	No addition to the utilization of Biofuels since 2010	The utilization of NRE Biofuels for power plant, industrial, and transportation activities, with a GHG emission reduction target of 47.53 million metric tons of CO_2e	

	• New and renewable energy power plants in business areas	No addition of New and Renewable Energy (NRE) power plant programs in business areas since 2010	Utilization of NRE for power plant in business areas with a GHG emission reduction target of 27.59 million metric tons of CO_2e	
	• Direct utilization	No addition of direct utilization programs since 2010	Utilization of NRE, biomass, and biogas in off-grid power plants with a GHG emission reduction target of 0.44 million metric tons of CO_2e	
	• Biomass co-firing	No biomass co-firing program	Utilization of NRE for power plant with a GHG emission reduction target of 8.88 million metric tons of CO_2e	
	• Biogasoline	No use of biogasoline since 2010	Utilization of NRE biogasoline for the transportation sector with a GHG emission reduction target of 0.44 million metric tons of CO_2e	
	• Co-processing of alternative fuels (alternative fuel substitution) in Industry	No addition of alternative fuel substitution since 2010	Utilization of NRE through alternative fuel substitution in the cement Industry with a GHG emission reduction target of 1.35 million metric tons of CO2e	

Energy Efficiency				
	• Energy management in energy providers, industries, and buildings	No implementation of energy management since 2010	Implementation of energy management with a GHG emission reduction target of 34.86 million metric tons and a GHG emission reduction target of 0.44 million metric tons of CO_2e	
.	• Energy efficiency enhancement for household and commercial electrical appliances	No energy efficiency enhancement for electrical appliances since 2010	Implementation of energy efficiency measures for household and commercial electrical appliances with a GHG emission reduction target of 83.84 million metric tons of CO_2e	Unconditionally similar actions with an expansion of energy efficiency mitigation efforts
	• Implementation of energy-efficient Public Street Lighting	No street light efficiency program	Utilization of energy-saving lamps for Public Street Lighting in households/commercial areas with a GHG emission reduction target of 1.77 million metric tons of CO_2e	
	• Efficient cooking appliances	No implementation of efficient cooking appliance programs since 2010	Energy efficiency enhancement of cooking appliances for household and commercial use, with a GHG emission reduction target of 3.23 million metric tons of CO_2e	
	• Implementation of electric vehicles	No implementation of electric vehicles since 2010	Utilization of electric vehicles in the transportation sector, with a GHG emission reduction	

			target of 7.23 million metric tons of CO_2e	
	• Energy management in transportation, transportation energy efficiency through the enhancement of mass public transport (Commuter Line/CL, Bus Rapid Transit/BRT, Freight Trains, Passenger Trains, Light Rail Transit/LRT, Mass Rapid Transit/MRT, et cetera), transportation traffic management, and fleet rejuvenation	No implementation of energy management in transportation, nor transportation energy efficiency through the enhancement of mass public transport (CL, BRT, Freight Trains, Passenger Trains, MRT, LRT, et cetera), transportation traffic management, or fleet rejuvenation since 2010	Implementation of energy management in transportation, energy efficiency through the enhancement of mass public transport (CL, BRT, Freight Trains, Passenger Trains, MRT, LRT, et cetera), transportation traffic management, and fleet rejuvenation, with a GHG emission reduction target of 6.33 million metric tons of CO_2e	Similar action to CM1, subject to the expansion of energy efficiency mitigation initiatives

Low-Carbon Emission Fuels				
	• Fuel switching of Petroleum Fuels	No implementation of fuel switching programs since 2010	Fuel switching within the transportation sector, from Research Octane Number (RON) 88 Petroleum Fuels to higher RON variants, with a GHG emission reduction target of 0.23 million metric tons of CO_2e	Unconditionally similar actions with an expansion of mitigation initiatives through the use of low carbon emission fuels
	• Conversion of kerosene to Liquefied Petroleum Gas (LPG)	Utilization of kerosene since 2010	Substitution of kerosene with LPG for household consumption, with a GHG emission reduction target of 14.68 million metric tons of CO_2e	
	• Expansion of Piped Natural Gas Connections for Households (JARGAS)	No further expansion of JARGAS connections since 2010	Implementation of Jargas for household consumption, with a GHG emission reduction target of 0.6 million metric tons of CO_2e	

Implementation of clean energy power plants				
	• Implementation of Clean Coal Technology (CCT)	No additional installation of CCT power plants since 2010	Steam Power Plants utilizing CCT with a GHG emission reduction target of 7.42 million metric tons of CO_2e	Unconditionally similar actions, subject to the expansion of mitigation initiatives through the Implementation of clean energy power plants
	• Implementation of gas-fired power plants	No additional installation of gas-fired power plants since 2010	Gas-Fired Power Plants/Combined Cycle Gas Turbine Power Plants (PLTG/GU) with a GHG emission reduction target of 14.11 million metric tons of CO_2e	

2. Waste Sector

No.	Mitigation Actions	*Baseline Activities*	Mitigation Actions Unconditionally	Mitigation Actions with International Support
Domestic Solid Waste Sub-Sector				
1.	Implementation of water efficiency concepts in water management	No recovery of Landfill Gas (LFG)	Execution of LFG recovery supported by the rehabilitation of Open Dumping Sites into compliant sanitary landfills, equipped with methane gas utilization facilities. Emission reductions totaling 1.5 million metric tons of CO_2e derived from LFG utilization for >5,900 households and >45 Megawatt (MW) of LFG-generated electricity.	Enhanced execution of LFG recovery supported by the rehabilitation of open dumping sites into compliant sanitary landfills, equipped with methane gas utilization facilities. Enhanced emission reductions totaling 1.5 million metric tons of CO2e derived from LFG utilization for >5,900 households and >45 MW of LFG-generated electricity.

No.	Mitigation Actions	*Baseline Activities*	Mitigation Actions Unconditionally	Mitigation Actions with International Support
2.	Waste utilization through composting and Reduce, Reuse, and Recycle (3R) initiatives for paper waste	No additional activities nor policy enforcement regarding composting and 3R initiatives	Waste treatment through composting of 3.7 million metric tons of Municipal Domestic Waste (MSW) and 3R initiatives for paper reuse/recycling of up to 3.7 million tons. The available infrastructure and facilities comprise: - Waste banks: 762 units; - Integrated Waste Treatment Facilities (TPST): 2,857 units (1,469 units integrated with composting); - 3R Waste Treatment Sites: 3,018 units (1,703 units integrated with composting). Target: abatement of 4.8 million metric tons of CO2e	Enhanced waste treatment through composting of 3.7 million metric tons of MSW and 3R initiatives for paper reuse/recycling of up to 3.7 million metric tons. The available facilities and infrastructure comprise: - Waste banks: 762 units; - Integrated Waste Treatment Facilities: 2,857 units (1,469 units integrated with composting); - 3R Waste Treatment Sites (TPS3R): 3,018 units (1,703 units integrated with composting). Target: abatement of 4.8 million metric tons of CO_2e
3.	Implementation of Waste-to-Energy Power Plants (*Pembangkit Listrik Tenaga Sampah*/PLTSa)/Refuse Derived Fuel (RDF)	No initiatives directed towards waste-to-energy development	Waste-to-energy utilization through RDF (within the industrial sector) or as a renewable energy source within PLTSa. PLTSa/RDF facilities are targeted to treat 4.6 million metric tons of municipal solid waste to avoid 1.9 million metric tons of CO2e.	Enhanced waste-to-energy utilization through RDF (within the industrial sector) or as a renewable energy source within PLTSa. PLTSa/RDF facilities are targeted to treat 4.6 million metric tons of municipal solid waste to avoid 1.9 million metric tons of CO_2e.

No.	Mitigation Actions	*Baseline Activities*	Mitigation Actions Unconditionally	Mitigation Actions with International Support
4.	Waste utilization to divert disposal from landfills toward a zero-landfill goal by 2060	No existing directive toward zero-landfill disposal	Further enhancement of waste utilization through waste-to-energy facilities or waste recovery and utilization, treating 10.2 million metric tons of Municipal Domestic Waste (MSW) by 2030 to avoid 6.2 million metric tons of CO_2e	Enhanced waste utilization initiatives through waste-to-energy facilities or waste recovery and utilization, treating 10.2 million metric tons of MSW by 2030 to avoid 6.2 million metric tons of CO_2e
Domestic Wastewater Sub-Sector				
1.	Domestic wastewater management	No mitigation actions.	Centralized/integrated Wastewater Treatment Plants (WWTPs) (at municipal, communal, or regional scales) utilizing aerobic systems. Fecal Sludge Treatment Plants (FSTPs) for the processing of sludge from septic systems. Biodigesters and biogas utilization.	Enhanced management of centralized/integrated WWTPs (at municipal, communal, or regional scales) utilizing aerobic systems. Enhanced management of FSTPs for the processing of sludge from septic systems. Enhanced management of Biodigesters and biogas utilization.
Industrial Waste Sub-Sector				
1.	Industrial Waste Management	No mitigation actions.	Utilization of WWTP sludge and industrial solid waste through composting, raw material reuse, energy recovery, and other relevant methods.	Enhanced utilization of WWTP sludge and industrial solid waste through composting, raw material reuse, energy recovery, and other relevant methods.

No.	Mitigation Actions	*Baseline Activities*	Mitigation Actions Unconditionally	Mitigation Actions with International Support
			Wastewater treatment in oil palm, pulp & paper, fruit/vegetable processing & juice, and other industries: to implement methane capture and utilization (biogas).	Enhanced wastewater treatment in oil palm, pulp & paper, fruit/vegetable processing & juice, and other industries: to implement methane capture and utilization (biogas).
			The previous target of 3 million metric tons of CO_2e has been increased to 26 million metric tons of CO_2e (equivalent to the recovery of 1.2 million metric tons of methane)	The previous target of 18 million metric tons of CO_2e has been increased to 28 million metric tons of CO_2e (equivalent to the recovery of 1.3 million metric tons of methane)

3. Industrial Processes and Product Use Sectors

No.	Mitigation Actions	*Baseline Activities*	Mitigation Actions, Unconditionally	Mitigation Actions with International Support
Cement Industry				
1.	Enhancement of Blended Cement production by increasing the proportion of alternative materials to reduce the clinker-to-cement ratio	Clinker-to-cement ratio at 81%	Clinker-to-cement ratio at 70%	Clinker-to-cement ratio at 65%
Ammonia Industry				

No.	Mitigation Actions	*Baseline Activities*	Mitigation Actions, Unconditionally	Mitigation Actions with International Support
1.	Ammonia plant revitalization projects to reduce natural gas consumption intensity	No plant upgrades or enhancements (specific natural gas consumption at 45 Gigajoules (GJ)/ton of ammonia (NH_3))	Construction of 3 new plants to replace existing plants (specific natural gas consumption reduced from 45 to 40 GJ/ton of NH_3 by 2030)	Further plant enhancements, with specific natural gas consumption of 35 GJ/ton of NH_3 by 2030
2.	Retrofitting of ammonia plants (enhancement of plant efficiency and emission reduction within the Industrial Processes and Product Use Sector)	No retrofitting measures implemented	Partial retrofitting of ammonia plants	Utilization of plants for retrofitting
3.	CO_2 Utilization	No CO_2 utilization	Utilization of CO_2 as feedstock for the production of sodium carbonate (Na_2CO_3)	Further enhancement of CO_2 utilization
Other Industries				
		Aluminum Industry: Center Work Pre-Bake Cell Technology (CWPB)	Aluminum Industry: Sustaining plant operational enhancements (automation of feeding systems/hardware upgrades from CWPB to bar-brake technology). GHG emission reduction target of 0.1 million metric tons of CO_2e	

No.	Mitigation Actions	*Baseline Activities*	Mitigation Actions, Unconditionally	Mitigation Actions with International Support
		Nitric Acid Industry: No mitigation actions for nitrous oxide (N_2O), with continued utilization of existing technology since 2010 (with an Emission Factor (EF) of 10-19 kg N_2O per ton of nitric acid (HNO_3))	Nitric Acid Industry: Technological enhancements (with an EF of 8-9 kg N_2O/ton of HNO_3) and installation of non-selective catalyst reduction (NSCR) for N_2O destruction (EF of 2.5 kg N_2O/ton of HNO_3). GHG emission reduction target of 0.1 million metric tons of CO_2e	Nitric Acid Industry: Additional installation of catalysts for N_2O destruction. GHG emission reduction target of 0.2 million metric tons of CO_2e
		Iron and Steel Industry: No mitigation actions	Iron and Steel Industry: Technological enhancements in smelting processes and scrap utilization. Both initiatives will result in lower GHG emission intensity. GHG emission reduction target of 0.1 million metric tons of CO_2e	Iron and Steel Industry: Further mitigation activities in the enhancement of smelting processes and scrap utilization. Both initiatives will result in further GHG emission reductions. GHG emission reduction target of 0.9 million metric tons of CO_2e

4. Agriculture Sector

No.	Mitigation Actions	*Baseline Activities*	Mitigation Actions Unconditionally	Mitigation Actions with International Support
1.	Utilization of Low-Emission Crops	No mitigation actions	Total land use for low-emission crops reaches 902,000 hectares (Ha) by 2030*	Total land use for low-emission crops reaches 932,000 Ha by 2030*

No.	Mitigation Actions	*Baseline Activities*	Mitigation Actions Unconditionally	Mitigation Actions with International Support
2.	Implementation of water efficiency concept in water management	No mitigation actions	Water efficiency implementation reaches 2,583,000 Ha by 2030*	Water efficiency implementation reaches 3,376,000 Ha by 2030*
3.	Organic Fertilizer	No mitigation actions	Organic fertilizer application reaches 1,287,000 metric tons by 2030**	Organic fertilizer application reaches 1,368,000 metric tons by 2030**
4.	Livestock manure management for biogas	No mitigation actions	Livestock manure utilized for biogas is sourced from 166,000 head of livestock by 2030***	Livestock manure utilized for biogas is sourced from 249,000 head of livestock by 2030***
5.	Feed supplements for ruminant livestock	No mitigation actions	A total of 6,942,000 of ruminants will be provided with feed supplements by 2030****	A total of 8,075,000 of ruminants will be provided with feed supplements by 2030****

* The adoption of best available technologies will enhance crop productivity and minimize the requirement for land-use change for agricultural purposes.

** The application of synthetic nitrogen fertilizer will be reduced by 0.15 metric tons for every one metric ton of organic fertilizer utilized.

*** Under the assumption that government subsidies will be maintained, by considering the substantial investment costs involved.

**** For unconditional mitigation actions, the scope covers approximately 27.4% of the large ruminant population and 20% of the small ruminant population. For conditional mitigation actions (supported by international supports), the scope covers approximately 37.4% of the large ruminant population and 20% of the small ruminant population.

5. Foresty Sector

No.	Mitigation Actions	Baseline Activities	Mitigation Actions Unconditionally	Mitigation Actions with International Support
1.	Deforestation Rate			
	• Total Deforestation (Thousand Ha)	2013–'20: 920 2020–'30: 820	2013–'20: 459 2020–'30: 359	2013–'20: 300 2020–'30: 175
	• Unplanned Deforestation (Thousand Ha) *Unplanned deforestation is calculated using the following formula: (Total Deforestation - Planned Deforestation)*	2013–'20: 387 2020–'30: 235	It is assumed that the unplanned deforestation rate remains low and the total deforestation does not exceed 0.450 million Ha per annum. 2013–'20: 209 2020–'30: 146	It is assumed that the unplanned deforestation rate remains low and the total deforestation does not exceed 0.450 million Ha per annum. 2013–'20: 68 2020–'30: 57
	• Planned Deforestation (Based on modeling) (Thousand Ha)	2011–2030: results based on modeling	2011–2030: results based on modeling	2011–2030: results based on modeling
2.	Land Rehabilitation			
	Land Rehabilitation	No mitigation actions	Enhancement of carbon sequestration by expanding land rehabilitation programs (afforestation and reforestation) and accelerating the development of timber plantations on unproductive land (totaling approximately 11.5 million Ha).	Enhancement of carbon sequestration by expanding land rehabilitation programs (afforestation and reforestation) and accelerating the development of timber plantations on unproductive land (totaling approximately 11.5 million Ha).

No.	Mitigation Actions	Baseline Activities	Mitigation Actions Unconditionally	Mitigation Actions with International Support
	Annual Planting Rate for Plantation Forest	No mitigation actions.	The annual planting rate for plantation forests under both unconditional and conditional (with international supports) mitigation actions will reach 320,000 Ha per annum (totaling 6.4 million Ha by 2030)	The annual planting rate for plantation forests under both unconditional and conditional (with international supports) mitigation actions will reach 320,000 Ha per annum (totaling 6.4 million Ha by 2030)
	Annual Planting Rate for Land Rehabilitation	No mitigation actions.	The annual planting rate for land rehabilitation will reach 280,000 Ha per annum (totaling 5.6 million Ha by 2030).	The annual planting rate for land rehabilitation will reach 280,000 Ha per annum (totaling 5.6 million Ha by 2030).
3.	Peatland Water Management	No mitigation actions	Implementation of water management in oil palm plantation reaches 892,000 Ha and in Plantation forest reaches 329,000 Ha	Implementation of water management in oil palm plantations reaches 892,000 Ha and in plantation forest reaches 548,000 Ha
4.	Peatland Restoration	No restoration activities	Peatland restoration is projected to reach 2 million Ha by 2030	Peatland restoration is projected to reach 2 million Ha by 2030

B. Climate Change Adaptation Actions

1. Food Security Sector

No.	Key Programs	Strategies	Action Plans
1.	Sustainable agriculture and plantations	Mainstreaming /integration of climate change adaptation within	Identification, development, and implementation of best practices for the economic empowerment of farmers

No.	Key Programs	Strategies	Action Plans
		the agricultural sector, specifically for strategic commodities	Enhancing the management and provision of ecosystem services within the agricultural sector
			Development of agricultural financing schemes
		Development and implementation of adaptive technologies for the sustainable production of agricultural crops	Protection of agricultural crops against pests and diseases
			Research and development of high-yielding varieties (genetic engineering) and crop cultivation techniques.
			Improvement of water management systems
			Implementation of the integrated cropping calendar

2. Water Security Sector

No.	Key Programs	Strategies	Action Plans
1.	Integrated Watershed Management (IWM)	Enhancement of cross-sectoral and regional synergies in watershed management	Implementation of an integrated upstream-downstream approach in forest rehabilitation and restoration, watershed management plans, and the protection of terrestrial water resources
			Creation of enabling conditions for the integration of disaster risk management into business models and practices
		Mainstreaming/integrating climate change adaptation into watershed management to mitigate risks/losses from climate-related disasters	Development of ecosystem services within watershed management
			Identification, development, and implementation of best practices in watershed management
			Integration of watershed management into spatial plan

No.	Key Programs	Strategies	Action Plans
2.	Land conservation	Avoiding the conversion of productive land to other land uses	Rehabilitation of degraded land integrated with soil and water conservation
		Development and implementation of adaptive technologies to support sustainable land management practices	Application of soil and water conservation technologies utilizing mechanical and vegetative methods
3.	Enhancement of community settlements, provision of basic needs, and development of climate-resilient infrastructure	Integration of climate change adaptation into infrastructure development and maintenance	Enhancing water resource management, including groundwater, and measures for disaster emergency anticipation
4.	Ecosystem conservation and restoration	Enhancement of ecosystem functions to improve essential services	Restoration of degraded mangrove and peatland areas
5..	Integrated Watershed Management	Development of climate-resilient watershed ecosystem management	Improving watershed management planning by incorporating climate change vulnerability, risks, and impacts
			Development of policy instruments and tools to assess climate change vulnerability, risks, and impacts on priority watersheds

3. Energy Security Sector

No.	Key Programs	Strategies	Actions
1	Utilization of degraded land for renewable energy	Integrated programs for degraded land rehabilitation and biomass energy development	Rehabilitation of degraded land using energy crop species
			Research and Development of sustainable biomass energy crops and the bio-energy industry
2	Improvement of energy efficiency and consumption patterns	Enhancement of stakeholder awareness regarding the adaptation co-benefits of mitigation efforts through improved energy efficiency and consumption patterns	Energy efficiency campaigns
3.	Enhancement of community settlements, provision of basic needs, and development of climate-resilient infrastructure	Integration of climate change adaptation into infrastructure development and maintenance	Strengthening compliance with carrying capacity and environmental capacity regulations in infrastructure development
4.	Climate-resilient cities	Promoting the development of climate-resilient cities	Capacity building and institutional strengthening
			Enhancement of urban forests and other green open spaces

4. Health Resilience Sector

No.	Key Programs	Strategies	Actions
1.	Enhancing adaptation capacity	Responding to climate change impacts and managing risks, including health risks	Addressing the drivers of vulnerability to climate change
			Enhancement of stakeholder participation at all levels in building climate resilience, including health protection and waste management
			Increasing community capacity to mitigate climate change impacts in the health sector
2.	Enhancement of community settlements, provision of basic needs, and development of climate-resilient infrastructure	Mainstreaming climate change adaptation into spatial planning and strengthening its implementation within spatial plans	Climate awareness campaigns ,the implementation of residential development standards, including environmental health and buildings

5. Ecosystem Resilience Sector

No.	Key Programs	Strategies	Action
1.	Sustainable agriculture and plantations	Mainstreaming /integration of climate change adaptation in the agricultural sector, particularly for strategic commodities	Enhancing the management and provision of ecosystem services in the agricultural sector
		Development and implementation of adaptive technologies for the sustainable production of agricultural crops	Improvement of water management systems

No.	Key Programs	Strategies	Action
2.	Integrated Watershed Management (IWM)	Enhancement of cross-sectoral and regional synergies in Watershed management	Implementation of an integrated upstream-downstream approach in forest rehabilitation and restoration, Watershed management plans, and terrestrial water resource protection
			Creation of enabling conditions for the integration of disaster risk management into business models and practices
		Mainstreaming /integrating climate change adaptation into Watershed management to reduce risks/losses from climate-related disasters	Development of ecosystem services in Watershed management
			Integration of Watershed management into spatial plan
3.	Reduction of deforestation and forest degradation rates	Mainstreaming/integrating climate change adaptation into forest management to support mitigation actions and enhance the economic resilience of forest-dependent communities. Development and implementation of adaptive technologies to support sustainable land management practices	Strengthening the implementation of deforestation reduction efforts
			Sustainable utilization of non-timber forest products by local and *adat* communities
			Identification, development, and implementation of best practices and local wisdom in forest resource utilization
			Creating enabling conditions for the application of environmentally friendly technologies
			Facilitation, oversight, enforcement, and compliance of environmentally friendly technology implementation
4.	Land conservation	Avoiding the conversion of productive land to other land uses	Rehabilitation of degraded land integrated with soil and water conservation
			Facilitation, oversight, enforcement, and compliance of spatial plans

No.	Key Programs	Strategies	Action
			Strengthening the implementation of spatial plan regulations
		Development and implementation of adaptive technologies to support sustainable land management practices	Application of soil and water conservation technologies using mechanical and vegetative methods
			Identification, development, and implementation of best practices for land management and utilization
5.	Utilization of degraded land for renewable energy	Integrated programs for degraded land rehabilitation and biomass energy development	Rehabilitation of degraded land using energy crop species
			Research and Development of sustainable biomass energy crops and the bio-energy industry
6.	Capacity building and community participation in local planning processes	Enhancement of community capacity in natural resource management as a source of income, including capacity for risk management and the sustainable utilization of natural resources	Awareness, education, and training campaigns
			Identification, development, and implementation of best practices
		Strengthening community involvement in planning processes at all levels, considering participation, balance, gender equality, and vulnerable groups, in accordance with cross-generational needs	Development and implementation of community participation mechanisms, considering participation, equality, and gender balance, as well as vulnerable groups (persons with disabilities, children, and the elderly), and cross-generational inclusion
			Facilitation and oversight to ensure public interests, including gender considerations, are accommodated in development planning

No.	Key Programs	Strategies	Action
7.	Identification of climate-vulnerable areas in planning and land-use allocation	Development and utilization of information systems and the provision of data on climate change vulnerability, risks, and impacts	Strengthening the vulnerability index information system (Information System and Data on Vulnerability Index/ *Sistem Informasi dan Data Indeks Kerentanan*, SIDIK)
			Integration of SIDIK with other information systems related to climate change vulnerability, risks, and impacts
8.	Enhancement of community settlements, provision of basic needs, and development of climate-resilient infrastructure	Mainstreaming climate change adaptation into spatial planning and strengthening its implementation within spatial plans	Climate awareness campaigns and the implementation of residential development standards, including environmental health and buildings
9.	Social forestry	Increasing the involvement of local and adat communities in the development of social forestry	Awareness campaigns on the significance of forests' role in ecosystem resilience
		Strengthening the implementation of the landscape approach in social forestry	Facilitation, oversight, and compliance with sustainability principles in social forestry schemes
		Implementation of environmentally friendly technologies in social forestry	Creating enabling conditions for the application of environmentally friendly technologies
			Identification, development, and implementation of best practices applied to social forestry

No.	Key Programs	Strategies	Action
10.	Coastal area protection	Mainstreaming climate change adaptation into coastal and marine policies and programs	Implementation of ecosystem-based adaptation in coastal area development
			Implementation of integrated mangrove ecosystem management
			Enhancement of pollution control in coastal and marine areas, including marine debris and plastic waste
		Development of climate-resilient coastal areas	Improving communication, education, and community awareness on the significance of coastal ecosystem protection in mitigating disaster impacts
			Restoration of degraded coastal areas as essential ecosystem areas
			Improving the livelihoods of communities living in and depending on coastal areas
11.	Ecosystem conservation and restoration	Enhancement of conservation of ecosystems, species, and genetics	Development and implementation of in-situ and ex-situ conservation
			Prevention and eradication of invasive species
			Protection of existing marine areas and the establishment of new marine protected areas
		Enhancement of ecosystem functions to improve essential services	Restoration of degraded mangrove and peatland areas
			Enhancement of conservation education, including the involvement of *adat* communities for local wisdom

No.	Key Programs	Strategies	Action
12.	Integrated Watershed Management (IWM)	Development of climate-resilient Watershed ecosystem management	Improving Watershed management planning by considering climate change vulnerability, risks, and impacts
			Development of policy instruments and tools to assess climate change vulnerability, risks, and impacts on priority Watersheds
13.	Climate-resilient cities	Promoting the development of climate-resilient cities	Awareness campaigns on the importance of integrating climate change vulnerability, risks, and impacts into urban planning and development
			Revitalization of urban infrastructure to enhance adaptation capacity and resilience to climate change impacts

MINISTER OF ENVIRONMENT/HEAD OF
ENVIRONMENTAL PROTECTION AGENCY OF THE
REPUBLIC OF INDONESIA,

signed

HANIF FAISOL NUROFIQ