



Secretariat of National Action Plan for Greenhouse Gas Emissions Reduction (RAN-GRK)

In 2009, Secretariat of National Action Plan for Greenhouse Gas Emissions Reduction was established under the Ministry of National Development Planning/National Development Planning Agency, having a task to facilitate the implementation of RAN/RAD-GRK activities in cooperation with Ministries/Agencies, Local Government, Business Actors and Community. Secretariat RAN-GRK will facilitate the implementation of activities under the coordination of the National Development Planning Agency and facilitate regional working group at the provincial, district, and city level in preparing BAU Baseline and mitigation actions.

Objectives & Functions



Giving technical assistance and capacity building to regional working group to reporting, evaluation and monitoring (PEP) in online system.



Delivering GHG reduction reports from national and 34 provinces to Coordinating Ministry for Economic Affairs to be submitted to President of Republic Indonesia.

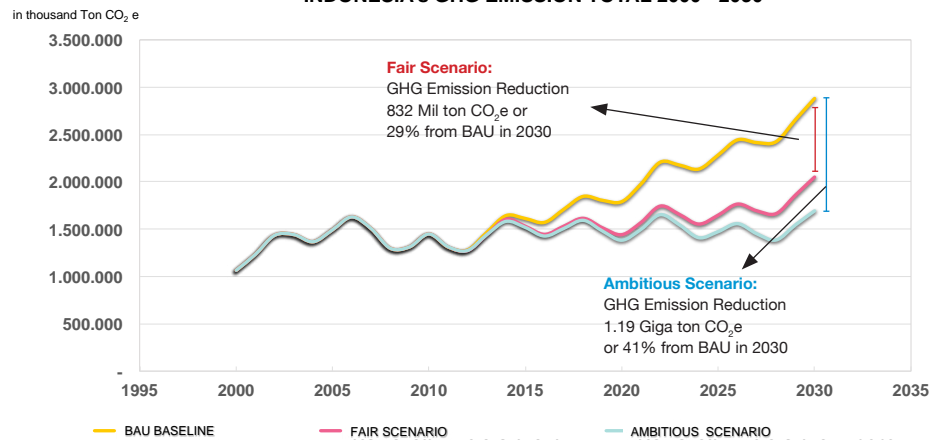


Supporting national policy in shifting President Regulation No. 61/2011 about RAN-GRK into Low-Carbon Development Planning.



Coordinating with national and regional working group, ministry/agency, Regional Government and Development Partners.

INDONESIA's GHG EMISSION TOTAL 2000 - 2030



By 2020, Indonesia has set an emission reduction target of 29% and 41% if it receives international support from the BAU scenario by 2030. The 2,881 GtCO₂e emissions in 2030 are projected in the BAU scenario in the INDC due to the development of energy policies, particularly for coal-fired power plants. Emission reduction targets compared to the baseline are as follows:

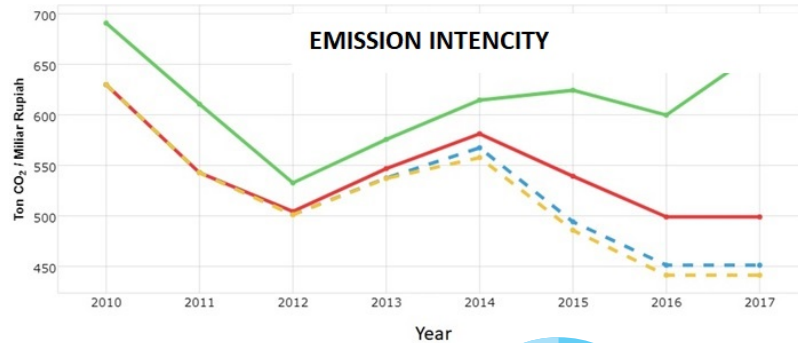
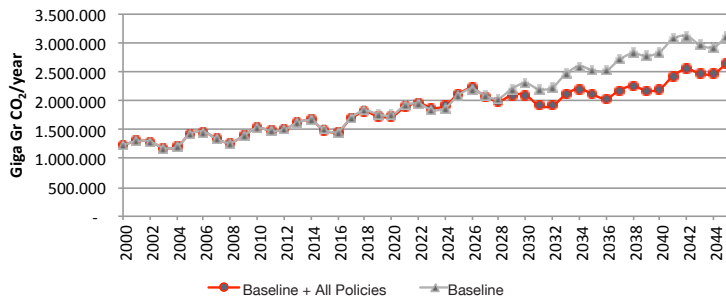


Sector	Emission Reduction Target (Mil Ton CO ₂ e) by 2030	
	29%(Fair)	41%(Ambitious)
Land Based Sector (Forestry, Peat land, Agriculture)	570.18	771.73
Energy Sector	234.85	371.1
IPPU Sector	1.36	3.23
Waste Management Sector	28.74	40.58
Total	835.13	1,186.63

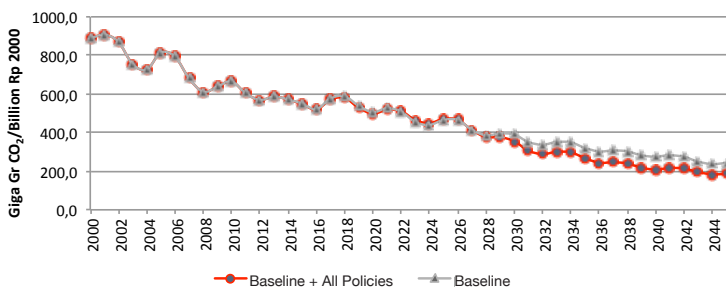
Baseline review uses system dynamics approach. System dynamics allows to illustrate and calculate some changes of mutual effects between elements, related either directly or indirectly, so that changes to one element will be taken into account in other elements. The Ministry of PPN/Bappenas in 2016 undertook further analysis related to the ambitious impact of efforts to reduce GHG emissions to economic growth and poverty. This is done by improving the system dynamics model previously used in INDC calculations. Therefore, from these projections, it shows that the government should prepare additional policies to balance emissions reductions against poverty alleviation and employment, especially for the poor.

Total Emission Projection (Gg CO₂/year)

Total Emission (Gg CO₂/year)
Emission Total



Intensitas Emission (Gg CO₂/Billion Rp 2000)



664.08
 (ton CO₂/
 billion rupiah)

Based on MER Online of National Mitigation Action of GHG Emission Reduction, the achievement of Indonesia's emission intensity is 664.08 tons CO₂ eq /billion rupiah). This achievement is still above the target for reducing emission intensity by the baseline scenario. The emission intensity achievement is calculated by dividing the total emissions reduction achievements of all sector up to 2016 (except the achievement from forestry sector until 2015) to per unit of GDP at a constant price by 2000. This is one of indicators to measure the success of low carbon development planning. The trends of this value that projected by 2045 will continue to decline and expected to be in line with the government's efforts to reduce GHG emissions through renewable energy policy. Lack of optimization emphasis on commercial energy consumption is another factor that makes the target is no achieved, therefore efforts to use renewable energy need to be encouraged more optimally.

**RAN-GRK
2020**

↓ 26%

Presidential Decree No. 61/2011

**INDC
2030**

↓ 29%

Paris Agreement

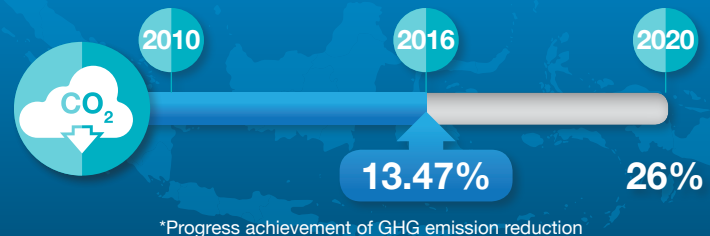
Based on policy interventions that currently used in Indonesia, the target of GHG emissions reduction and emissions intensity in 2020 and 2030 will not be achieved.

It is necessary to add other policy interventions (eg emission reductions from coal, etc.) to achieve the set emission reduction targets.

pep.pprk.bappenas.go.id

Reporting, Evaluating and Monitoring (PEP) Online

In October 2017, the Ministry of PPN/Bappenas launched PEP Online and assisted provincial and regency/city working groups in preparing BAU Baseline and mitigation action scenario. Every year, ministries or relevant institutions submit the results of the potential of GHG emission reduction from the implementation of activities in RAN/RAD-GRK to the Ministry of PPN/BAPPENAS. The results are compiled and reported to the Coordinating Ministry for Economic Affairs and submitted to President of Republic Indonesia.



In addition, the results of RAN/RAD-GRK are also reported as the status of achieving climate change in Indonesia in the process of international negotiations under the UNFCCC. From 2010-2016 the GHG Emission Reduction has achieved 13.47% compared to BAU Baseline in 2020. In order to achieve the emission reduction target, the participation from both national and regional support to mainstreaming the low carbon development as priority in their long term planning document.

INTRODUCTION

The National Action Plan for Climate Change Adaptation (RAN-API) is a document that was inaugurated in February 2014. The RAN API document is compiled by involving various stakeholders with an aim to achieve sustainable development system.

MANDATE

Mandate from the Ministry of National Development Planning / BAPPENAS to RAN-API:

1. Mainstream sustainable development and multi-sector climate change programs.
2. Increasing community resilience to climate change in 15 vulnerable areas.

ACHIEVEMENT

National Climate Projection (Atmospheric and Oceanic)

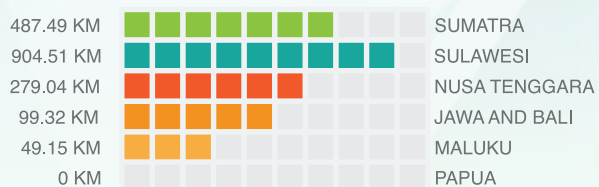
Climate projection study utilize the current climate projection data modalities in Indonesia, the Third National Communication (TNC) report and the Southeast Asia Regional Downscaling (SEACLID) / CORDEX-SEA regional climate modeling (CORDEX-SEA)) developed by Meteorological, Climatological, And Geophysical Agency (BMKG) for the territory of Indonesia. The output of the model has a spatial resolution of 25 km x 25 km and 5 km x 5 km which can include island level and analysis up to the provincial level. The results of this climate projection study will be an input on climate change hazard assessment.

Hazard Studies

The following are the results of hazard assessments for coastal, marine, water and agriculture sectors.

01 Coastal Sector

Below is the length of coastline that are most vulnerable to the impacts of climate change:



02 Marine and Fisheries Sector



The impact of high and extreme waves on the safety of shipping, especially fishing boats with a capacity of <10 GT is found in almost all parts of Indonesia based on baseline year and projection. In general, safe shipping areas for vessels with a weight of <10 GT are limited to shipping areas close to shore.



For vessels measuring 10 - 30 GT it is projected that there are additional areas of danger, especially in the north of Madura to the north of Flores, south of Kendari, west side of Karimata Strait and North of North Sulawesi.

03 Water Sector



Potential decrease of water availability in Nusa Tenggara, Java, North Maluku and Northern part of Sumatra.



Drought potential in Nusa Tenggara, Java and Northern part of Sumatra.



Potential flooding in major rivers and surrounding areas and in lowland especially in Java, East coast of Sumatra, West and South Kalimantan, and South Papua.

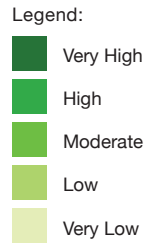
04 Agriculture Sector



There is an increasing hazard of declining rice production due to greater average climate change in the projection period (2020-2045) when compared to the baseline period (1993 - 2005) in all provinces in Indonesia.

The hazard of declining rice production due to climate change in periods of projection from high to very high levels occur in several provinces in the east to north of Indonesia, ranging from Papua, West Papua, Maluku, North Maluku, Central Sulawesi, North Sulawesi, Gorontalo, North Kalimantan, Central Kalimantan; also in West Nusa Tenggara and South Sumatra.

34 PROVINCES
GHG EMISSION REDUCTION
2010-2017



Pilot Areas
4 ICCSR Sectors
FOR ADAPTATION

ACTIVITIES SUMMARY

7 in Sumatra
28 in Java
11 in Bali & Nusa Tenggara
2 in Kalimantan



SUMATRA

Forestry : 35,456,075 Ton CO₂e
Agriculture : 1,500,000 Ton CO₂e
Energy : 142,000 Ton CO₂e
Transportation : 477,820 Ton CO₂e
Waste : 482,100 Ton CO₂e

7 Activities
• North Sumatra (2)
• South Sumatra (1)
• Bandar Lampung City (4)

23 Projects
• Jambi (3)
• Bangka Belitung (1)
• Riau (1)
• Aceh (2)
• North Sumatra (2)
• Riau (9)
• South Sumatra (3)
• West Sumatra (2)

JAVA

Forestry : 17,037,196 Ton CO₂e
Agriculture : 13,700,000 Ton CO₂e
Energy : 620,000 Ton CO₂e
Transportation: 1,800,000 Ton CO₂e
Waste : 539,100 Ton CO₂e

28 Activities
• West Java (5) • Blitar City (2)
• Pekalongan City (2) • Malang City (8)
• Semarang City (7) • Malang Regency (2)
• East Java (1) • Batu City (1)

36 Projects
• Banten (1)
• Central Java (8)
• East Java (6)
• Jakarta (3)
• West Java (11)
• Yogyakarta (7)





BALI & NUSA TENGGARA

Forestry : 701,095.8 Ton CO₂e
Agriculture : 1,940,000 Ton CO₂e
Energy : 110,000 Ton CO₂e
Transportation: 24,400 Ton CO₂e
Waste : 27,900 Ton CO₂e




11 Activities
• Bali Island (3)
• West Nusa Tenggara (8)

11 Projects
• Bali (1)
• West Nusa Tenggara (5)
• East Nusa Tenggara (5)

Legend:

-  Agriculture
-  Marine & Fisheries
-  Health
-  Water

Legend:

-  Land-based Mitigation
-  Adaptation & Resilience
-  Energy

Project Locations 2010-2019



KALIMANTAN

Forestry : 1,743,700 Ton CO₂e
 Agriculture : 1,200,000 Ton CO₂e
 Energy : 282,030 Ton CO₂e
 Transportation: 236,395 Ton CO₂e
 Waste : 93,100 Ton CO₂e

2 Activities
 • Tarakan City (2)

19 Projects
 • Central Kalimantan (11)
 • East Kalimantan (1)
 • South Kalimantan (3)
 • West Kalimantan (4)

SULAWESI

Forestry : 3,972,345 Ton CO₂e
 Agriculture : 2,500,000 Ton CO₂e
 Energy : 76,203 Ton CO₂e
 Transportation: 141,451 Ton CO₂e
 Waste : 383,400 Ton CO₂e

6 Projects
 • Gorontalo (1)
 • North Sulawesi (2)
 • South Sulawesi (1)
 • Southeast Sulawesi (2)

MALUKU & PAPUA

Forestry : 2,337,853 Ton CO₂e
 Agriculture : 120,000 Ton CO₂e
 Energy : 13,000 Ton CO₂e
 Transportation: 6,099 Ton CO₂e
 Waste : 21,500 Ton CO₂e

4 Projects
 • Maluku (2)
 • West Papua (2)

RAN-GRK

RAN-API

ICCTF



SUPPORTING THE INDONESIAN GOVERNMENT FOR A BETTER CLIMATE

www.icctf.or.id

ICCTF_ID icctfofficial ICCTF
Indonesia Climate Change Trust Fund

In order to coordinate actions to address climate change, the Government requires a national climate change funding agency with the professionalism and capacity to implement internationally recognised fiduciary standards. Therefore, in 2009 the Government established the Indonesia Climate Change Trust Fund (ICCTF), a climate change finance agency under direct Government control and management, with the goal of coordinating and disbursing funds to support climate change mitigation and adaptation activities in Indonesia.

To date the ICCTF has been through two institutional phases: firstly the Preparation Phase (PREP-ICCTF) period from 2010-2014 during which the United Nations Development Programme (UNDP) acted as interim trustee; secondly, since 2015 the ICCTF has become a Nationally Managed Trust Fund with an institutional structure as a Working Unit under the Ministry for National Development Planning/National Development Planning Agency. The fundamental difference between these two phases is that during phase one, UNDP financial systems were implemented, while during phase two national budget (APBN) mechanisms apply.

The ICCTF has endeavoured to implement Indonesian climate change policy through the management of domestic and international funds and their disbursement to programs in line with national/local government action plans for Greenhouse Gasses (GHG) emission reduction (RAN/RAD GRK) and the national action plan on climate change adaptation (RAN-API), as well as to support emission reduction target achievement under the Indonesian NDC. ICCTF has supported NDC emission reduction targets through 3 thematic windows: land area based mitigation, energy, and resilience and adaptation.

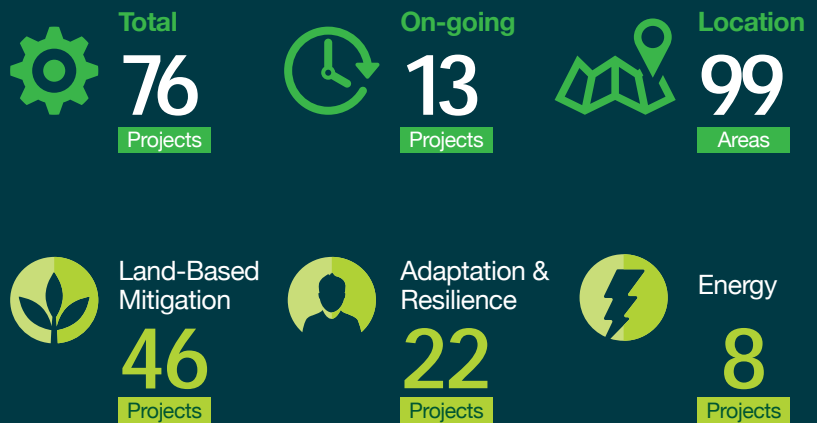
Objective

Supporting the Indonesian Government in reducing GHG emission through moves towards a low carbon economy and adaptation to climate change impacts.

Goals

1. Integrating climate change issues into national, provincial and district development plans;
2. Implementing mitigation and adaptation initiatives in the context of GHG emission reduction.

Program Achievements 2010-2018



Carbon sequestered through replanting & land rehabilitation

LAND-BASED MITIGATION

The land-based mitigation focus provides financial support for programs such as:

- Reforestation/rehabilitation of degraded lands, restoration of critically degraded land as community forests, and biomass energy estate.
- Management of degraded peatlands to lower emissions, and sustainable management of conservation areas.

FOCUS areas



ADAPTATION & RESILIENCE

The focus area on adaptation and resilience aims to strengthen national and local institutions and communities vulnerable to climate change impacts through:

- Disseminating climate information, developing and improving the design of adaptation strategies, the use of appropriate science and technology.
- Promoting appropriate policies which support the implementation of (adaptation and resilience) activities.

ENERGY

The focus area on energy contributes to GHG emission reduction through:

- Funding for low carbon energy technology.
- Energy conservation and energy efficiency, including renewable energy sources.

MARINE BASED

Aim to promote sustainable use of marine resources and to conserve biodiversity in coastal and marine areas including coral reef and blue carbon ecosystems such as mangrove and seagrass.

Direct Involvement

187
villages directly involved

284
local communities directly involved

1,317
people directly involved

254
canal blockings

656
deep wells

224
catchment wells & reservoirs

100
rain water harvesting tanks

Project on Mineral, Peatland & Coastal & Marine

Projects	2016-2018	2018-2019
Mineral Land	25	4
Peatland	15	6
Coastal & Marine	2	2

9.5
million ton CO₂eq
Equivalent to the emissions of

5 million Indonesian people per year

Average per capita CO₂ emissions of Indonesians = 1.9 ton CO₂ (World Bank 2013)

190,000
return flights between Jakarta & Jayapura

Jakarta - Jayapura - Jakarta emissions = 0.5 ton CO₂ (source: icao.int; assuming 100 passengers on each flight)

20%
of the total GHG emissions of Switzerland

In 2012, total emissions from Switzerland = 47 million tons CO₂ (source: National Inventory Report of Switzerland)

PARTNERSHIP FOR LOW CARBON DEVELOPMENT INDONESIA



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