

# Climate Change Policies and Role of Research Communities: Indonesia

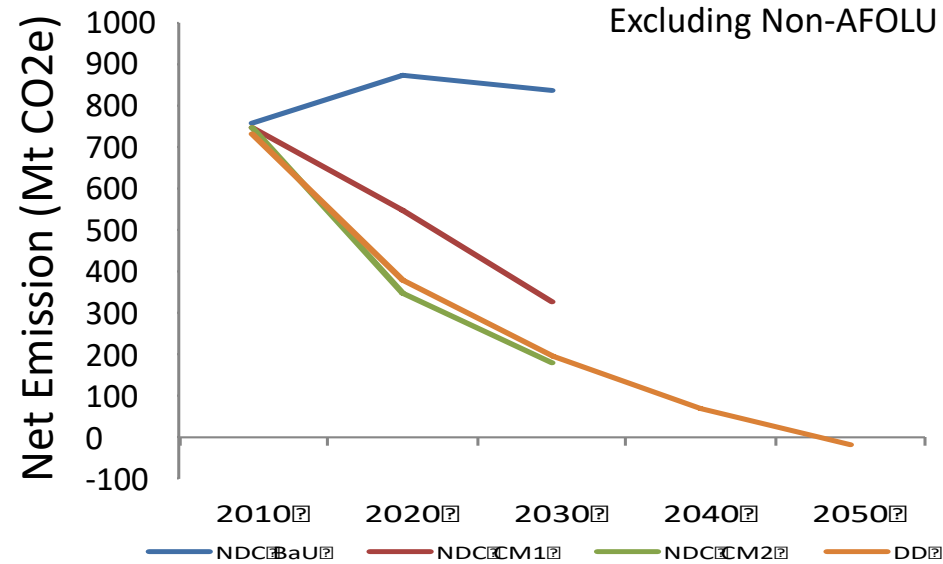
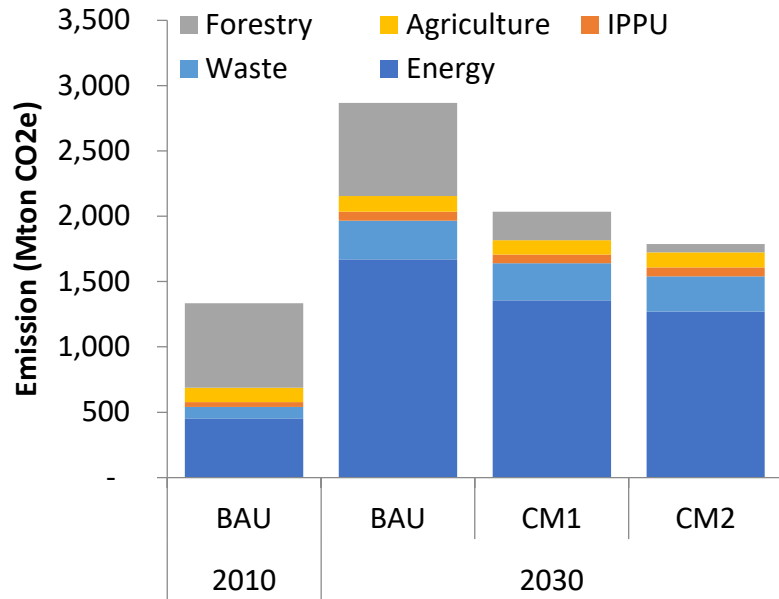
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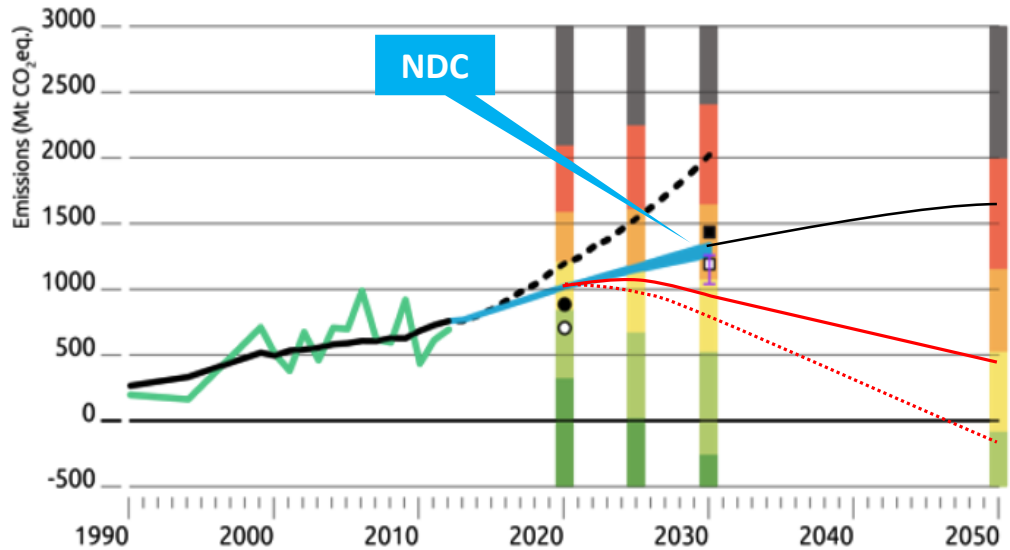
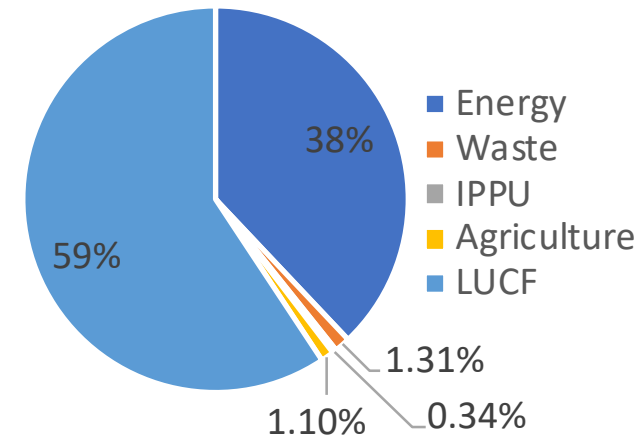
Centre for Climate Risk and Opportunity Management in South East Asia and Pacific  
IPB University



# INTRODUCTION



Emission Reduction Target by 2030

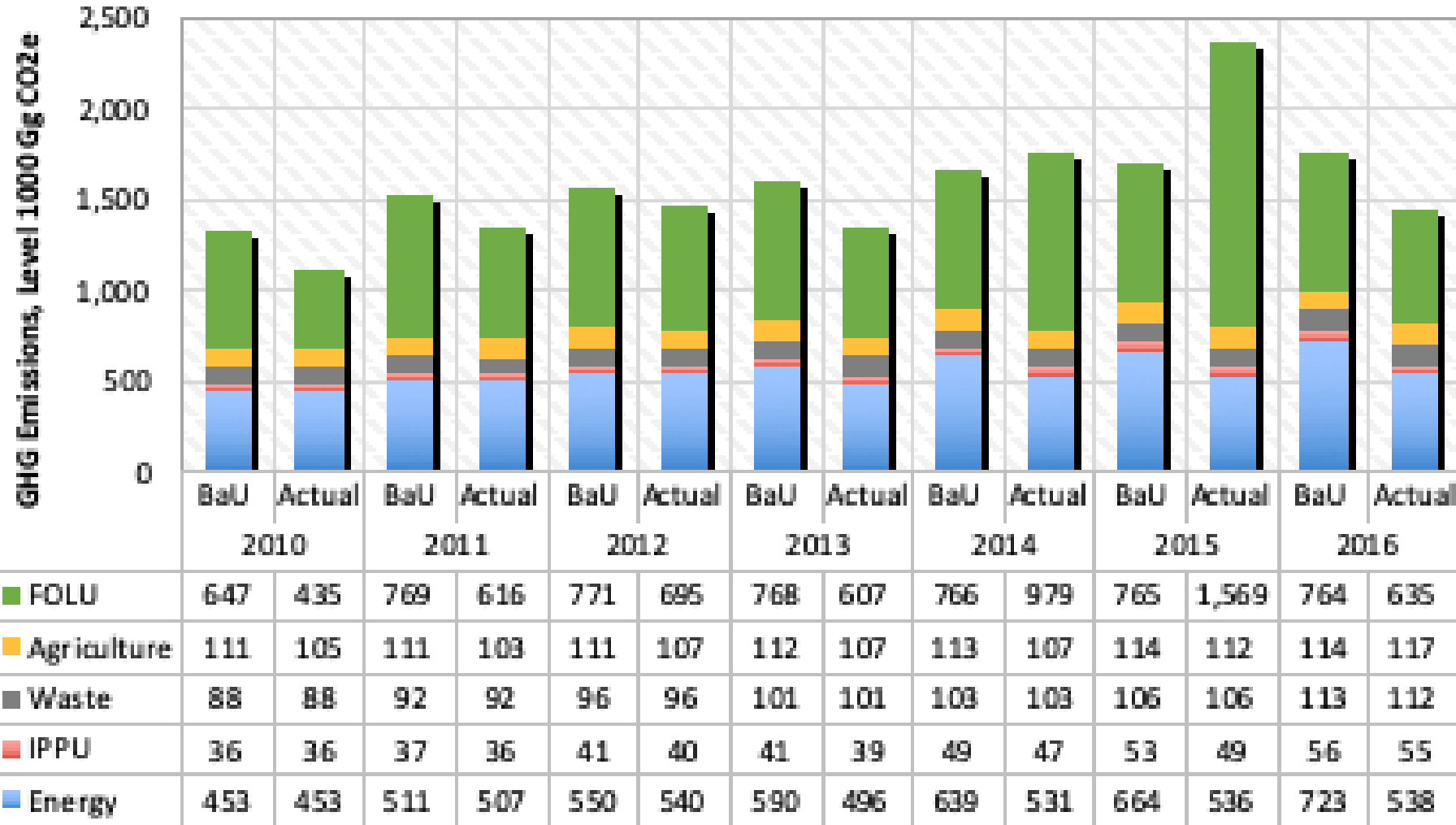


- Historical emissions, excl. forestry
- Historical emissions/removals from forestry
- Current policy projections
- 2020 pledge unconditional/conditional
- NDC unconditional/conditional
- Reference for pledges (BAU)
- National Energy Policy targets and biofuel targets

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- Critically insufficient
- Highly insufficient
- Insufficient
- 2°C compatible
- 1.5°C Paris Agreement compatible

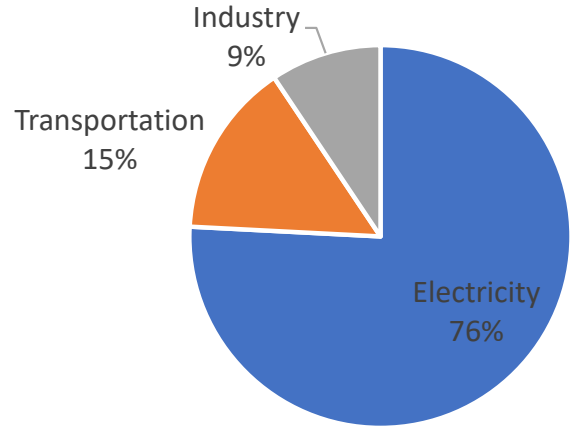
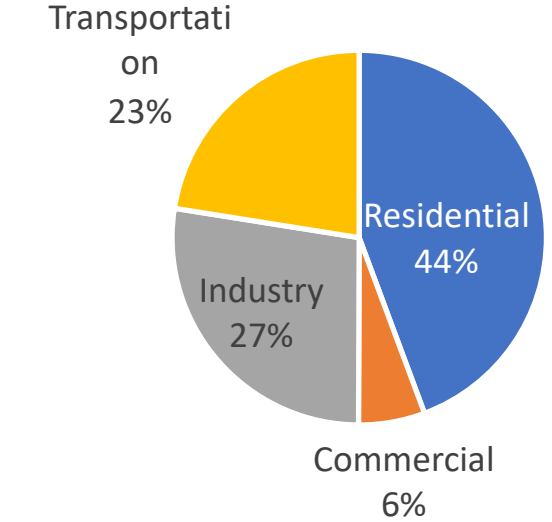
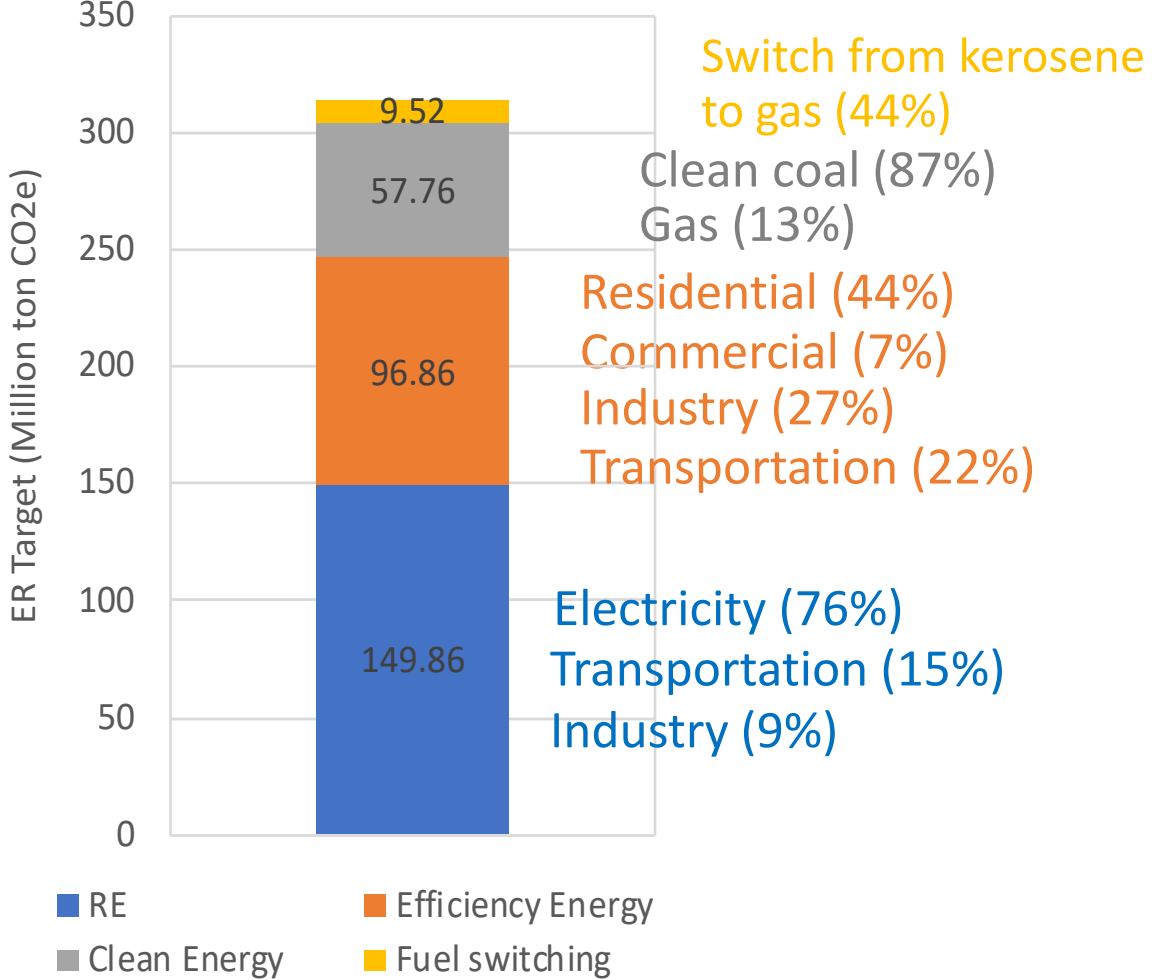
# PROGRESS



The increase of emission in 2015 mainly due to the increase of emission from FOLU due to fire

Source: MoEF, 2018

# Emission Reduction Target Energy & LUCF Sectors



Source: MoEF, 2018

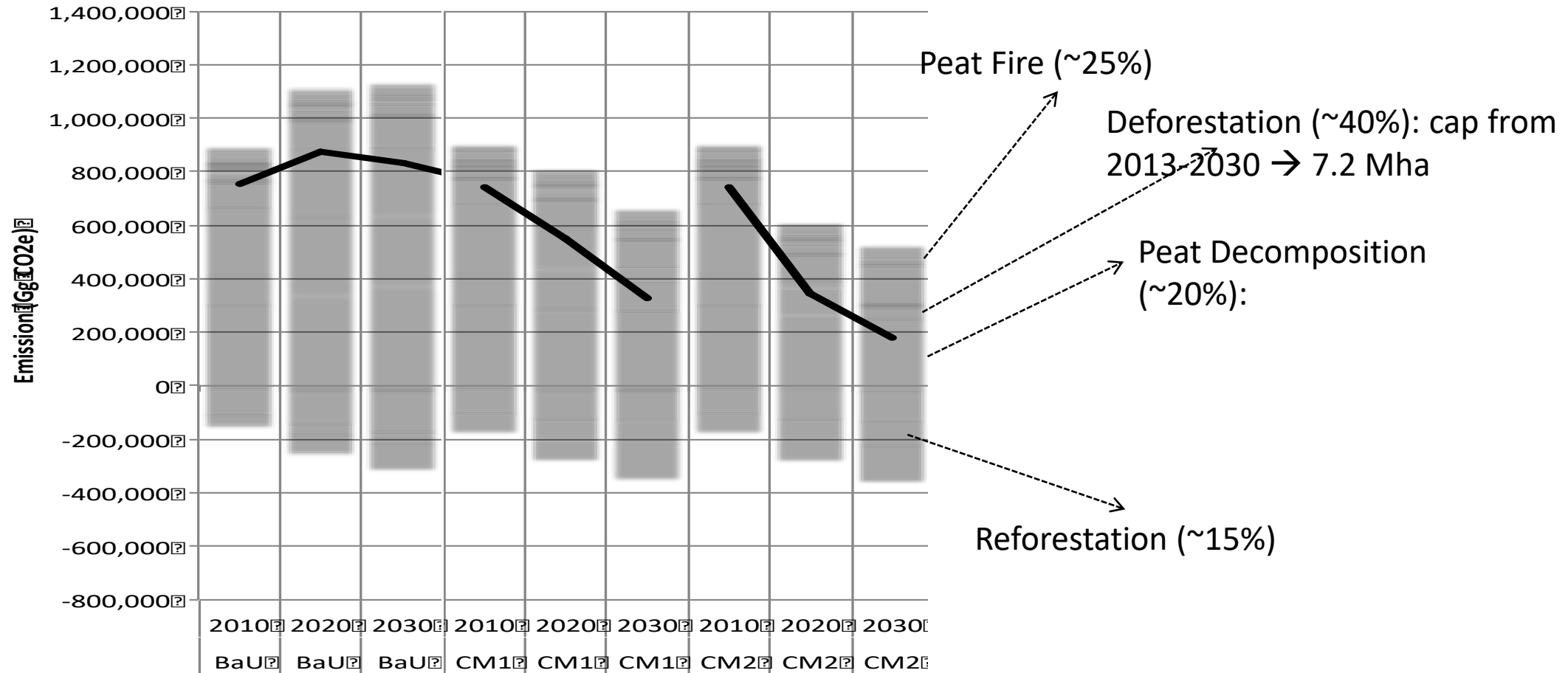
# Climate Change Policies Energy

ACTIONS	LEGAL INSTRUMENT	DESCRIPTION
<b>Fiscal Policy: Incentive/ Dis-incentive</b>	Presidential Regulation 47/2017	Regulate incentive, disincentive and financial support for environmental protection and management
<b>Renewable energy for transportation</b>	Biofuel blending (Ministry Regulation No. 12/2015)	Regulate the provision, utilisation, and administration of biofuels.
<b>Renewable energy, energy efficiency and energy conservation</b>	National Energy Policy (Government Regulation No.79/2014)	Regulate the national energy policy, including the renewable energy share target of 23% by 2025, and the energy elasticity target of <1.
<b>Electricity</b>	Electric Power Supply Plan year 2017-2026 (Minister Regulation No. 1415.k/20/MEM/2017)	Electric Power Supply Plan developed by the state-owned electricity company (PLN) features a plan for renewable share in power mix target of 22.4% in 2026

# Climate Change Policies Energy

ACTIONS	LEGAL INSTRUMENT	DESCRIPTION
<b>Energy efficiency</b>	Minister Regulation No. 7/2015	Implementation of Minimum Energy Performance Standards and Inclusion of Energy Saving Label for Air Conditioning Devices
<b>Various Actions</b>	Minister Regulation No. 3/2014 regarding Programme on Corporate Performance Rating in Environmental Management	Performance rating policy for company in environmental management. The rating is based on assessment of the company's performance in the category of waste management, energy efficiency, reduction of air pollution and GHG emissions, and planting (biodiversity)
<b>Green Industry</b>	Minister Regulation No. 51/2015 regarding Guidelines for the Development of Green Industry Standards	Policies that define standards for raw materials, energy, auxiliary materials, waste management, and corporate management for green industry

# Projection of Emission BAU, CM1 dan CM2: AFOLU



Timber Plantation	Urea Fertilization	Secondary Forest	Rice Field
Perennial crops	Affrn/Refotn	Livestock	Liming
Indirect N <sub>2</sub> O	Direct N <sub>2</sub> O	Biomass Burning	Wood harvesting
Peat Fire	Deforestation	Peat decomposition	Net Emission

Adapted from MoEF, 2018

# Scenari to meet the NDC Target

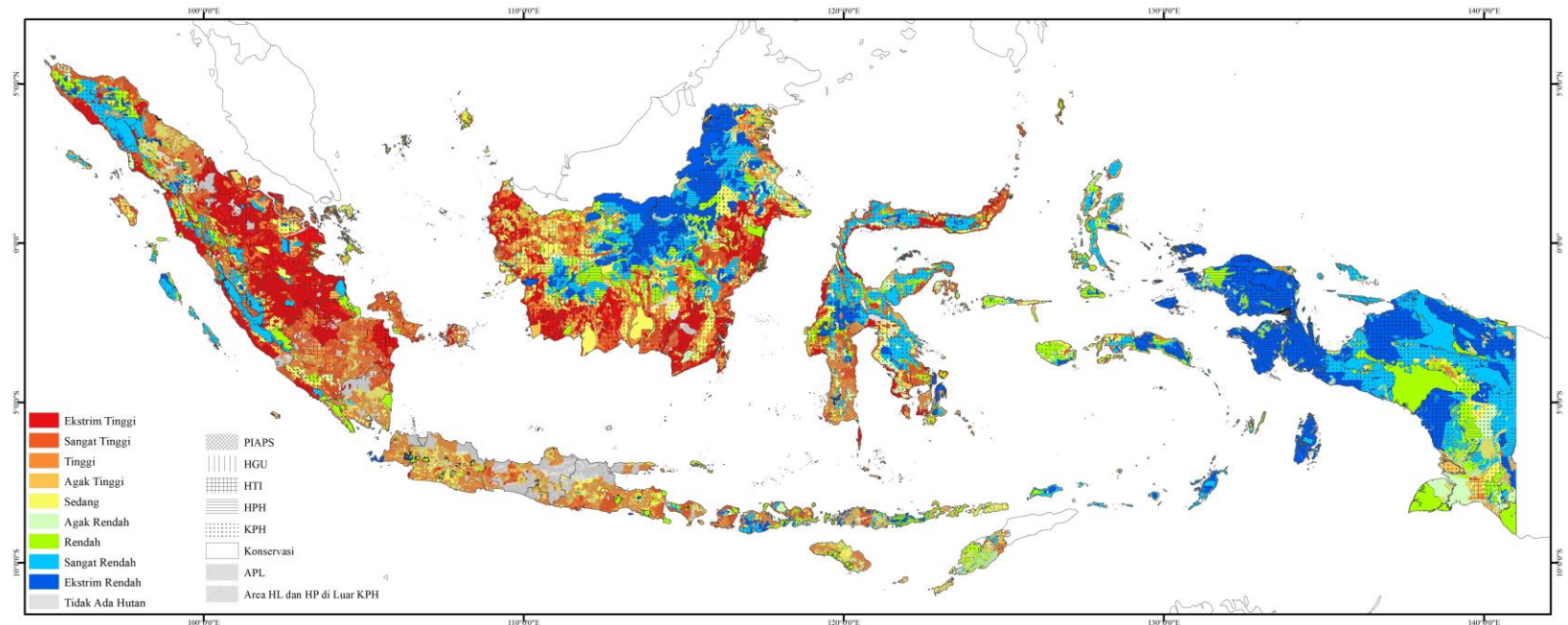
Jenis Konsesi	Optimum Scenario		Progressive Scenario	
	%	ha	%	Ha
<b>Social Forestry</b>	89.4	5,490,434	89.4	5,490,434
<b>HTI</b>	61.0	1,779,351	80.5	2,349,097
<b>Agriculture Plantation</b>	62.1	896,232	81.0	1,169,772
<b>Total Conservation</b>		8,166,017		9,009,303
<b>Total Convertible in concession</b>		2,334,526		1,491,240
<b>Cap outside concession (Unconditional target)</b>		1.601,474		2,333,760
<b>Deep Decarbonization (Cap outside concession) CM2 (Conditional Target)</b>		-1,489,526		-646,240

Forest in concession: 10.5 Mha-Timber Plantation = 2.92 Mha; Agriculture Plantation = 1.44 Mha; Social Forestry = 6.14 Mha; Side aside for protection based on Carrying Capacity 5.85 Mha

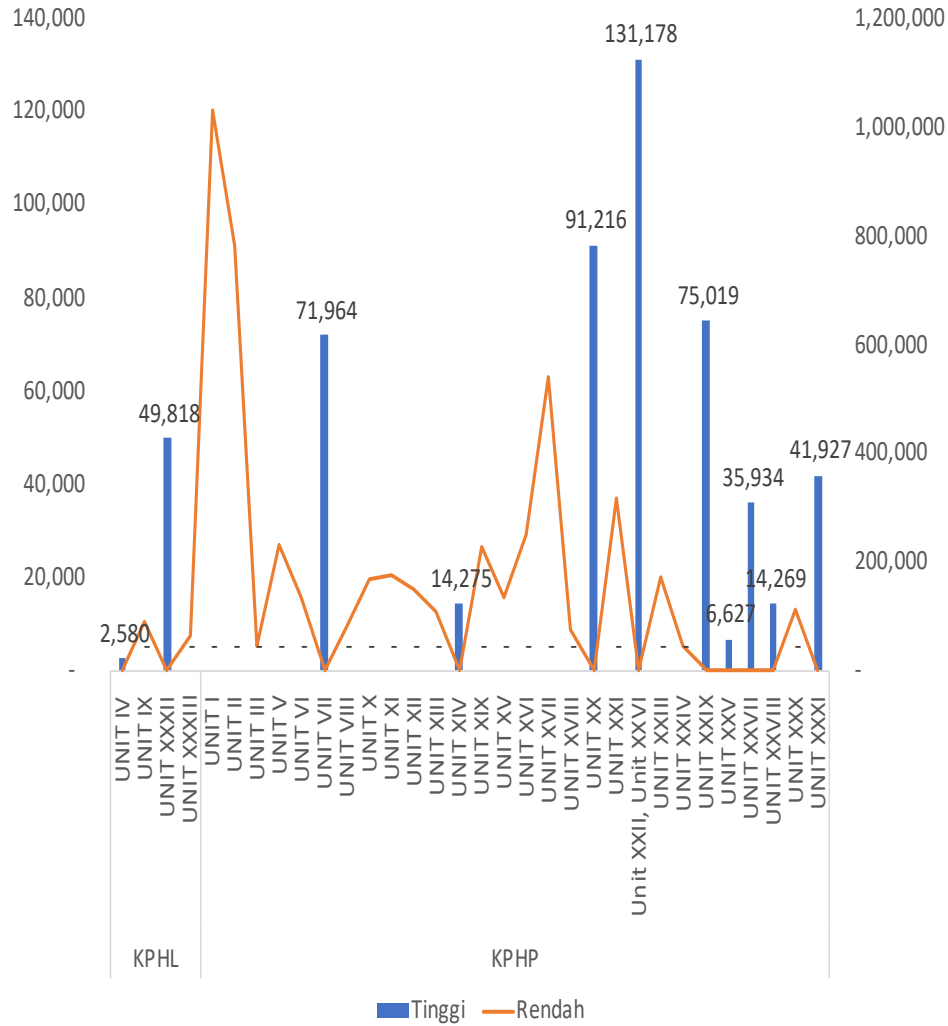


# Bio-geophysical Index (Minister Regulation 70/2017)

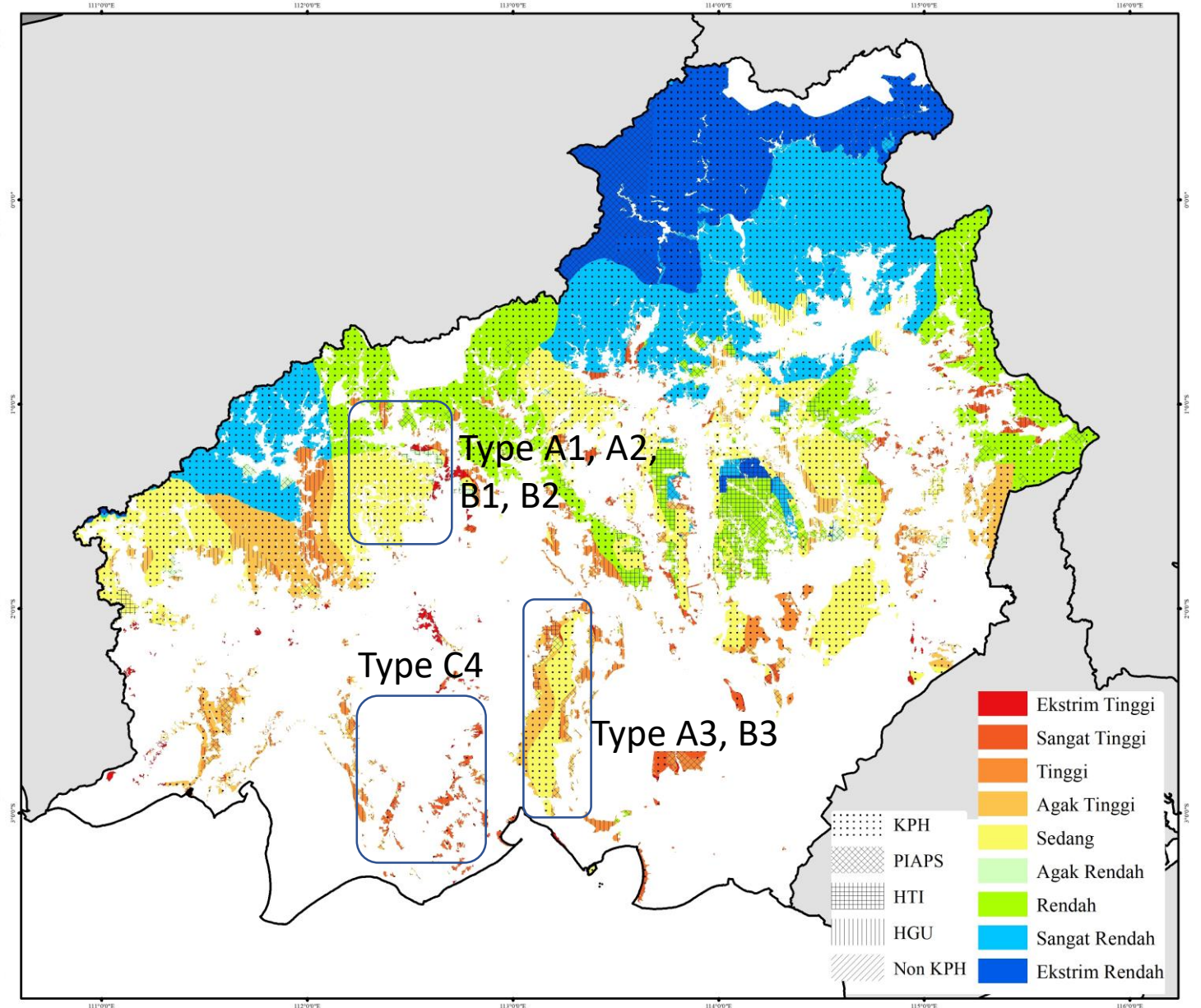
Historical Deforestation	Current Percent Forest Cover						
	0	1: <10	2: 10-20	3: 20-30	4: 30-50	5: 50-80	6: >80
1: High	0	1.0	1.5	2.0	2.5	3.0	3.5
3: Medium	0	2.0	2.5	3.0	3.5	4.0	4.5
5: Low	0	3.0	3.5	4.0	4.5	5.0	5.5



# IBGF-Central Kalimantan



Forested land in FMU exposed to high risk of deforestation



# Target: Land Rehabilitation and Peat Management

Actions	Skenario	Kumulative (2014-2030)
Peat restoration (x1000 ha) <sup>1</sup>	BAU	-
	CM1	1,396
	CM2	2,908
	Aktual <sup>2</sup>	-
Improve water management (x1000 ha)	BAU	-
	CM1	1,656
	CM2	1,728
	Aktual <sup>2</sup>	-

1- Successful rate 90%

Source: MoEF, 2018



# Sustainable Forest Management (SFM) in Production Forest

Actions	Scenarios	Cumulative (2013-2030)
Rate (x1000 ha)	BAU	18.259
	CM1	31.099
	CM2	31.099
	Aktual <sup>2</sup>	-

Source: MoEF, 2018

- Implementation of RIL (**Reduce Impact Logging, RIL**)
- ENR (*Enhanced Natural Regeneration*)

Crown Cover	Conservation	Non-FMU	FMU	APL	Total
<30%	<b>17,589</b>	<b>30,216</b>	<b>184,316</b>	<b>149,045</b>	<b>381,166</b>
30%-70%	<b>422,715</b>	<b>383,269</b>	<b>2,285,067</b>	<b>1,822,375</b>	<b>4,913,425</b>
>70%	16,130,479	5,806,979	56,193,743	4,931,265	83,062,465
Total	16,570,783	6,220,464	58,663,126	6,902,684	88,357,057

# Climate Change Policies FOLU

ACTIONS	LEGAL INSTRUMENT	DESCRIPTION
Institutional Strengthening	Minister Regulation No. 6/2010: Norm, standard, procedure, and criteria for managing forest in Protection and Production Forest Management Units	Policies that support the development of units mandated to improve management of forests in protection and production forests
Peat Management	Presidential Regulation No. 57/2016 as revision to Presidential Regulation No. 71/2014	Policies that apply more rigid rules in using peat land and mandating government at all levels, to develop protection and management of peat land in coordinated ways and also to restore/rehabilitate the degraded peat land
DD	Presidential Instruction No. 5/2019	Regulate permanent moratorium/suspension of new licenses and the improvement of primary natural forest governance and peatlands
DD-Fire Management	Presidential Instruction No. 11/2015	Policies that mandate all level of governments to develop land and forest fire management system at their jurisdiction and sanction for business players who do not implement the fire management in the area under their authority

# Climate Change Policies FOLU

ACTIONS	LEGAL INSTRUMENT	DESCRIPTION
<b>DD</b>	National Strategy for Forest Law Enforcement in Indonesia (RKTN Revised) 2019	A comprehensive programme to combat illegal logging. Since 2000 the Indonesian government has undertaken a comprehensive programme to combat illegal logging under the National Strategy for Forest Law Enforcement (FLENS). Presidential Instruction No. 4/2005 directed 18 government agencies and local government officials to cooperate in combating illegal logging
<b>DD &amp; Reforestation (Land Rehabilitation)</b>	Minister Regulation No. 83/2016	Policies on forest management system implemented by community for improving welfare and quality and potency of forest in the forest area.
<b>Reforestation (Land Rehabilitation)</b>	Minister Regulation No. 39/2016 as revision to Minister Regulation No. 9/2013.	Policies that provide support and incentives for the rehabilitation of degraded land and forest and optimize the use of unproductive land with multi purpose tree species (MPTS) under agroforestry system.
<b>SFM</b>	Minister Regulation No. 30/2016 on evaluation of performance of forest management	Policies that mandate all forest concession holders to have forest sustainable management certification. To ensure all concessions holders apply sustainable management practices

# Role of Research Communities

- Collaborative Research (national and local experts)
  - Long-term impact of CC
- Supporting local government for mainstreaming CCA into development → regulation on KLHS (Government Regulation 46/2016-providing scientific basis)
- Supporting communities in implementing climate smart practices
- Networking