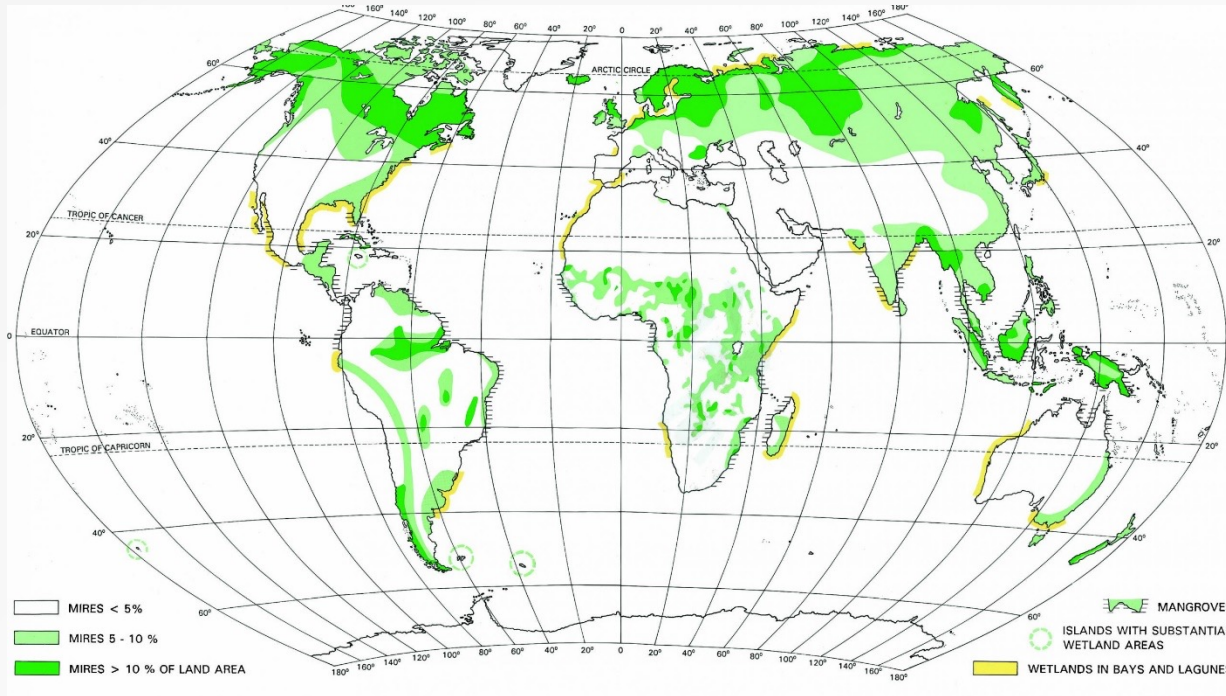


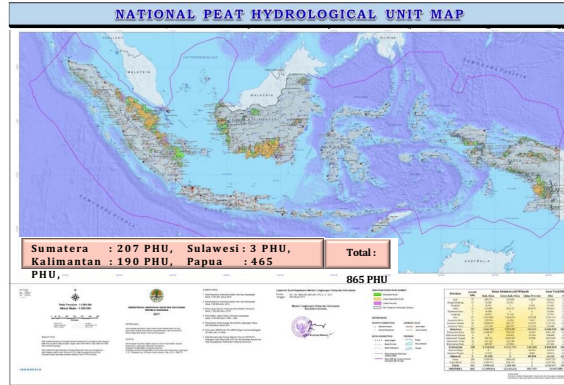
The 4th Indonesia – Japan Forest Talks (IJFT-4) REHABILITATION AND RESTORING DEGRADED PEATLANDS TO SUPPORT THE ACHIEVEMENT OF INDONESIA FOLU NET SINK 2023

Alue Dohong, M.Sc.,PhD.
Vice Minister of Environment and Forestry
Ministry of Environment and Forestry, Republic of Indonesia



World Peatlands Distributions





MOEF Decree No.
SK.129/MENLHK/SETJEN/KUM.1/2/2017
Concerning
DETERMINATION OF NATIONAL PEAT
HYDROLOGICAL UNITY MAP

The largest
tropical
peatland in the
world !!!

Distributed in:

- 19 provinces
- 135 districts

41.849.056 people
live in peatland
areas

*(more than population of
Malaysia & Singapore)*

TOTAL AREA OF PHU
24,667,804 hectares



12,398,482 hectares
Protection Function
12,269,321 hectares
Cultivation Function

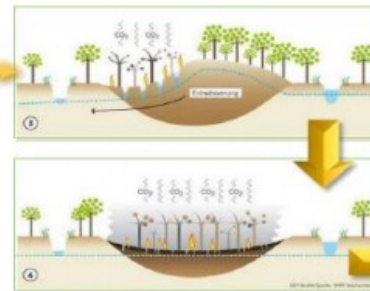
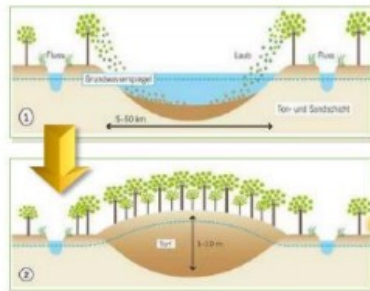
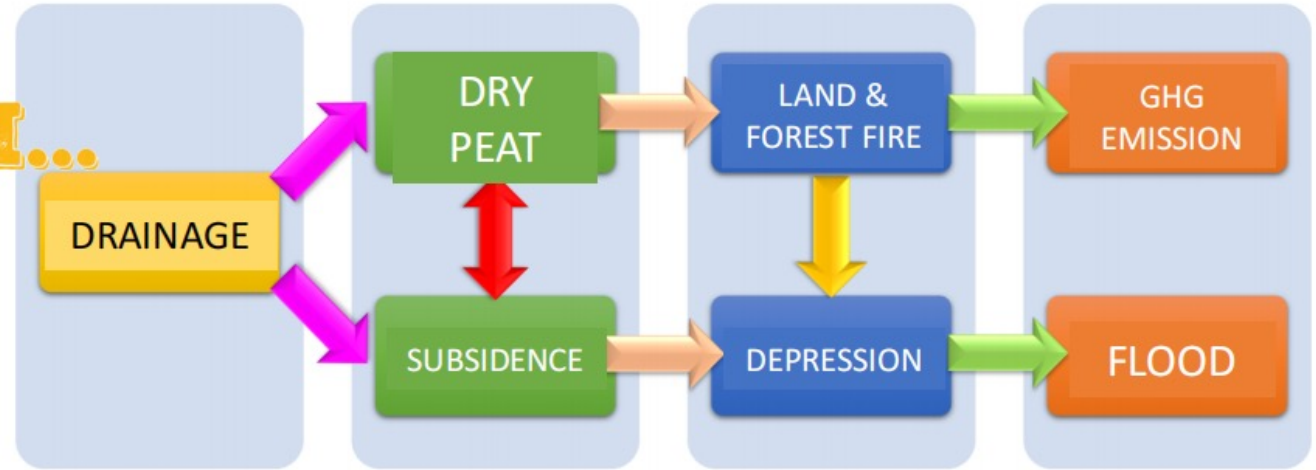


<http://pkgppkl.menlhk.go.id/>

<http://sippeg.menlhk.go.id/apps/>

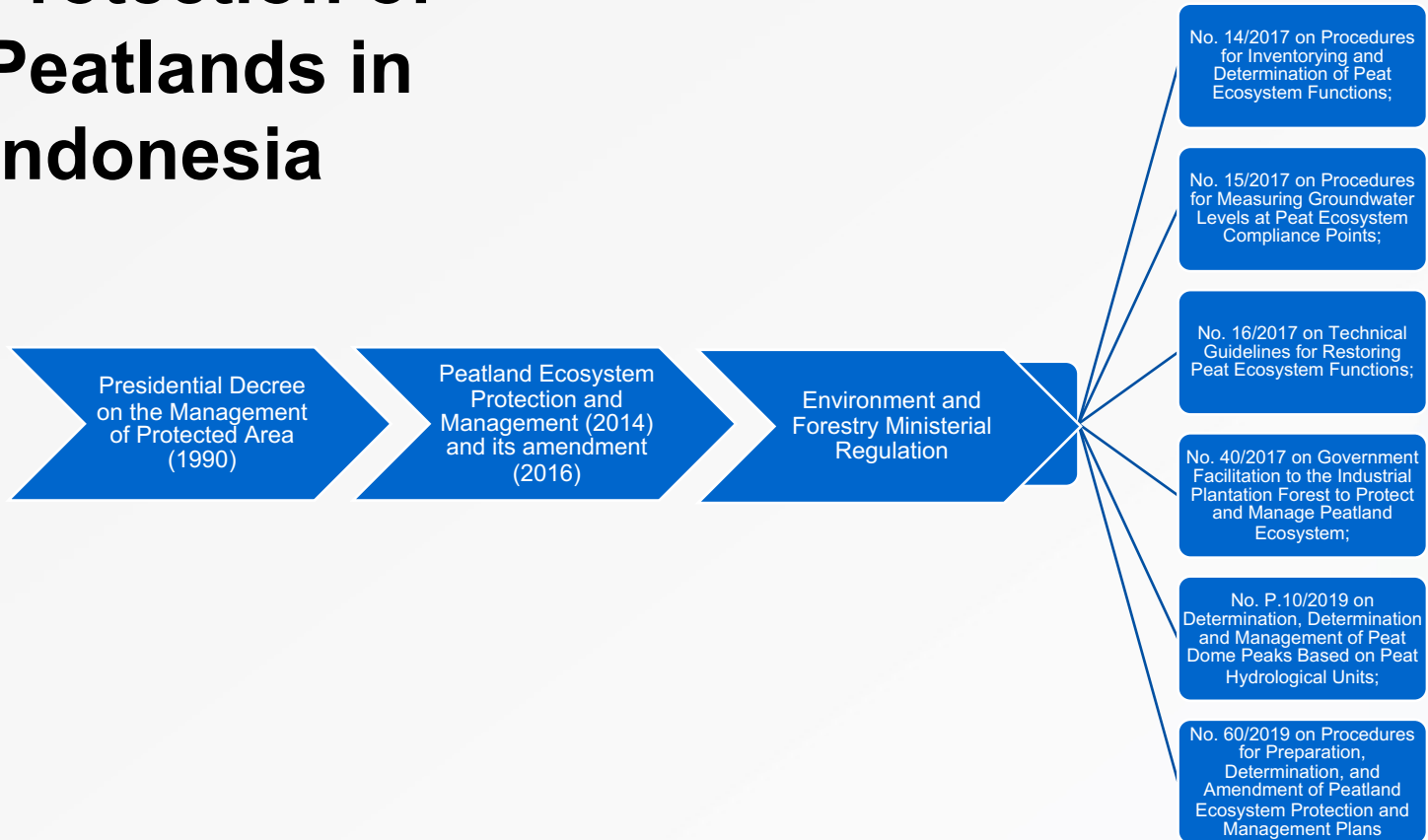
Here's the **PROBLEM...**

**MAIN
PROBLEM
IN
PEATLAND
ECOSYSTEM**

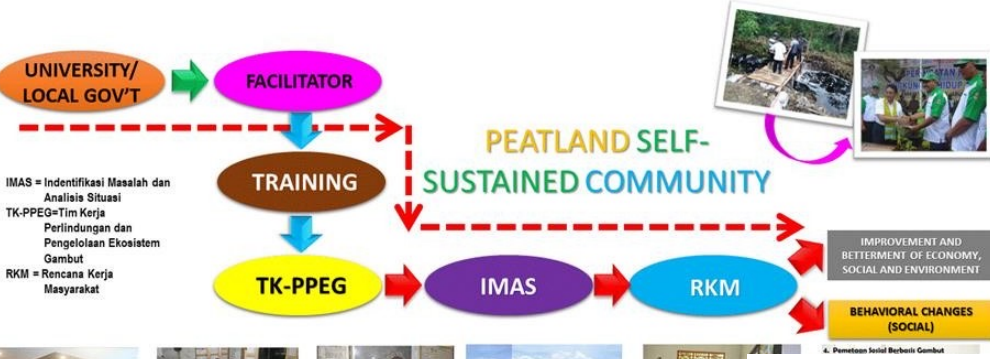


PEATLAND IS A COMPLEX AND VULNERABLE ECOSYSTEM

Protection of Peatlands in Indonesia



CONCEPT FOR RESTORATION OF PEATLAND ECOSYSTEM IN COMMUNITY AREAS [SOCIAL TRANSFORMATION PROCESS]

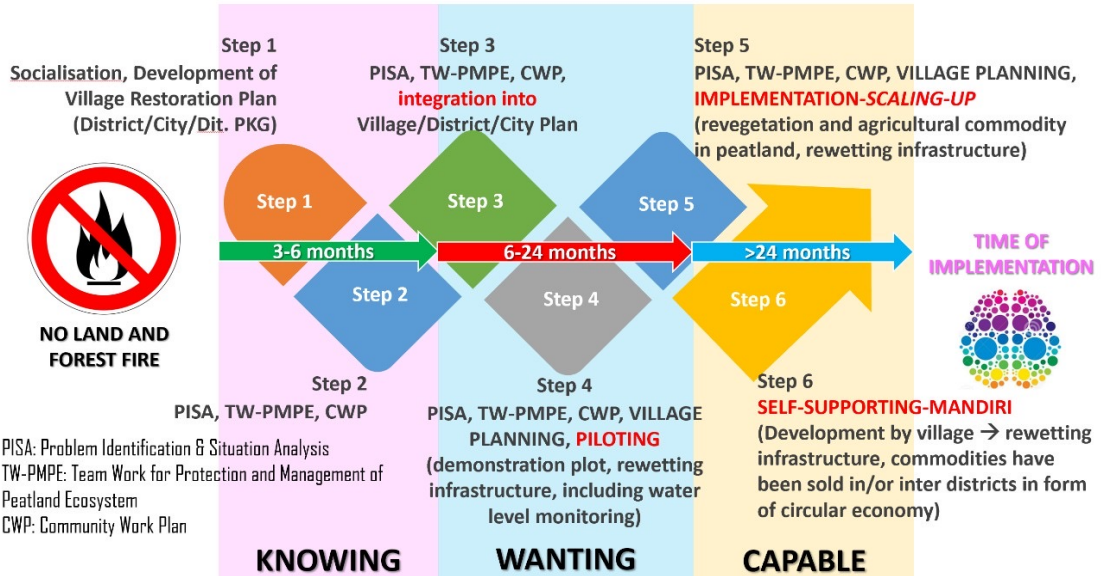


Establishment of steps and mechanism for peatland restoration in community areas

[DESA MANDIRI PEDULI GAMBUT]



STEP OF IMPLEMENTATION FOR PEAT SELF-SUPPORTING VILLAGE



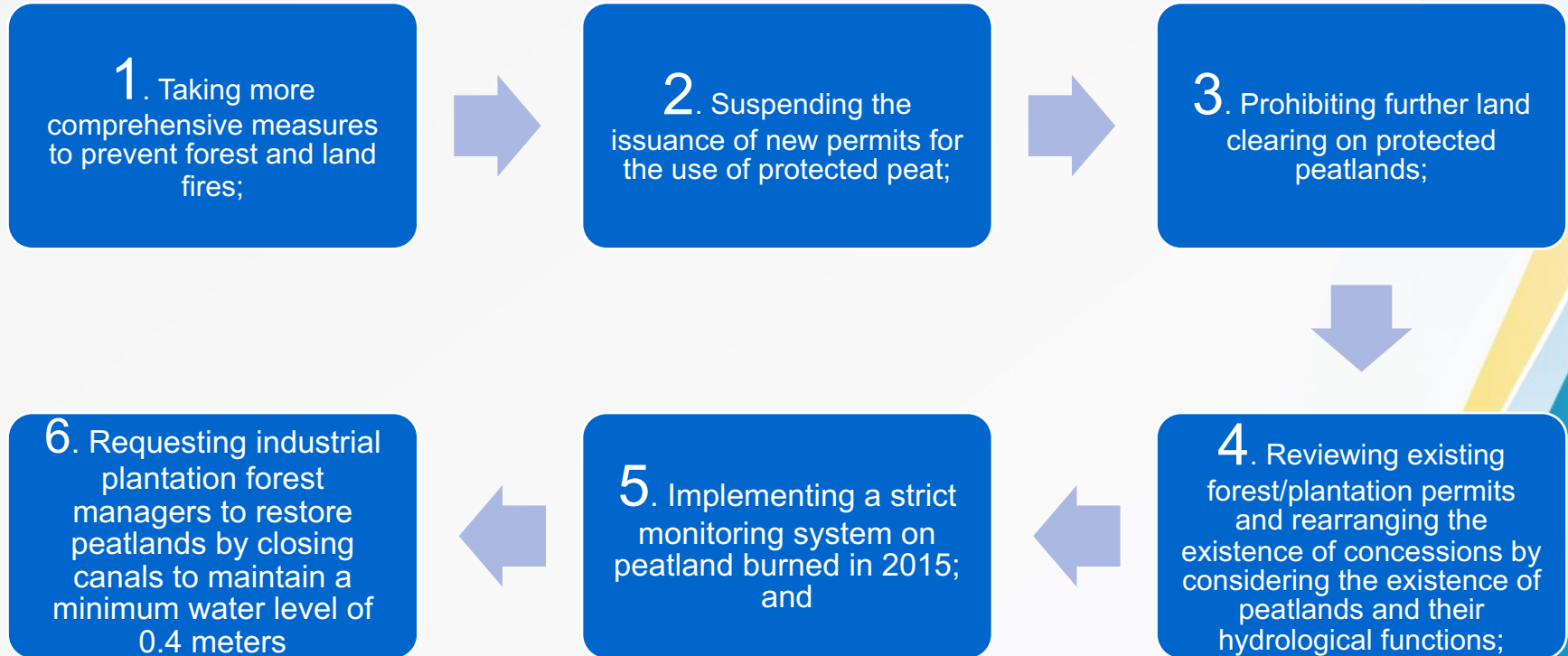
623 villages were intervened

The concept

- Bring back and preserve the water,
- Bring back and preserve the vegetation,
- Improve local community livelihoods, and
- Law and order

PROBLEM → Solution 1, Solution 2, Solution 3

Policies on Peatland Governance and Management



New Milestone

The Environment and Forestry
Ministerial Decree No
246/2020 on
**The National
Peatland Ecosystem
Protection and
Management Plan**

1

National Peatland Ecosystem
Protection and Management Plan

2

Controlling degradation
(prevention, mitigation, and
restoration)

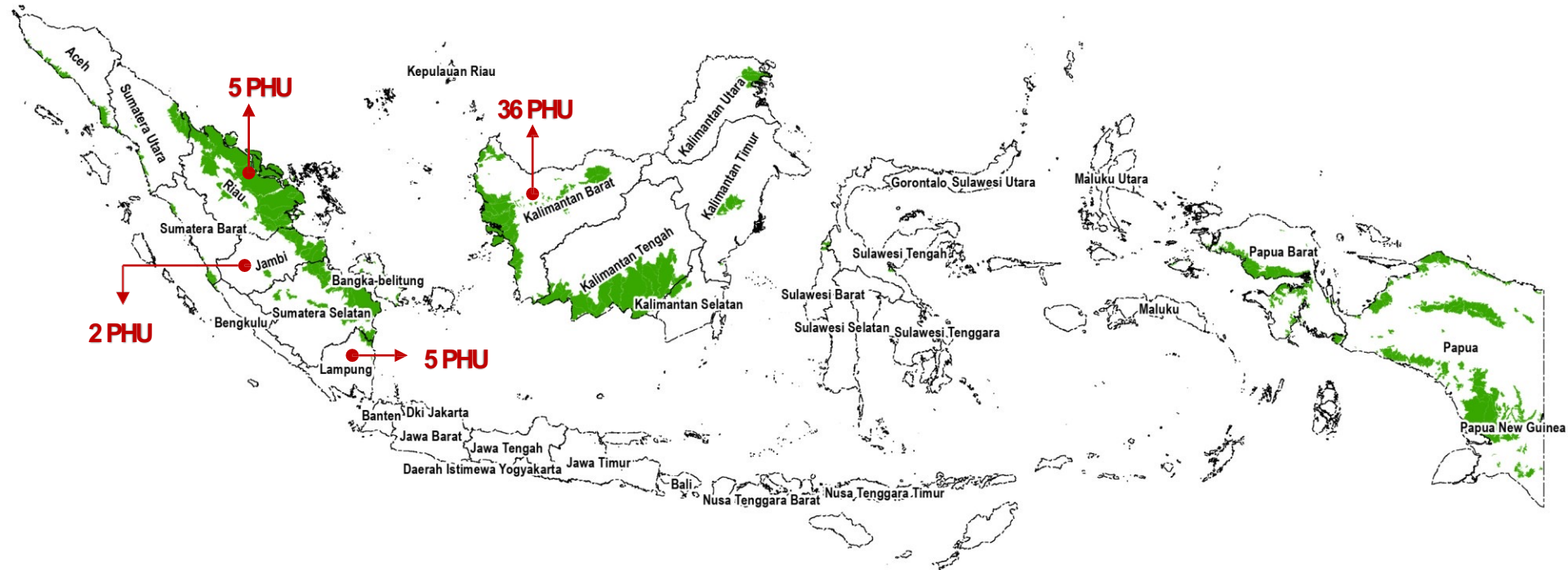
3

Maintenance (reserve and
conservation areas)

4

Climate change mitigation and
adaptation in peatland ecosystems

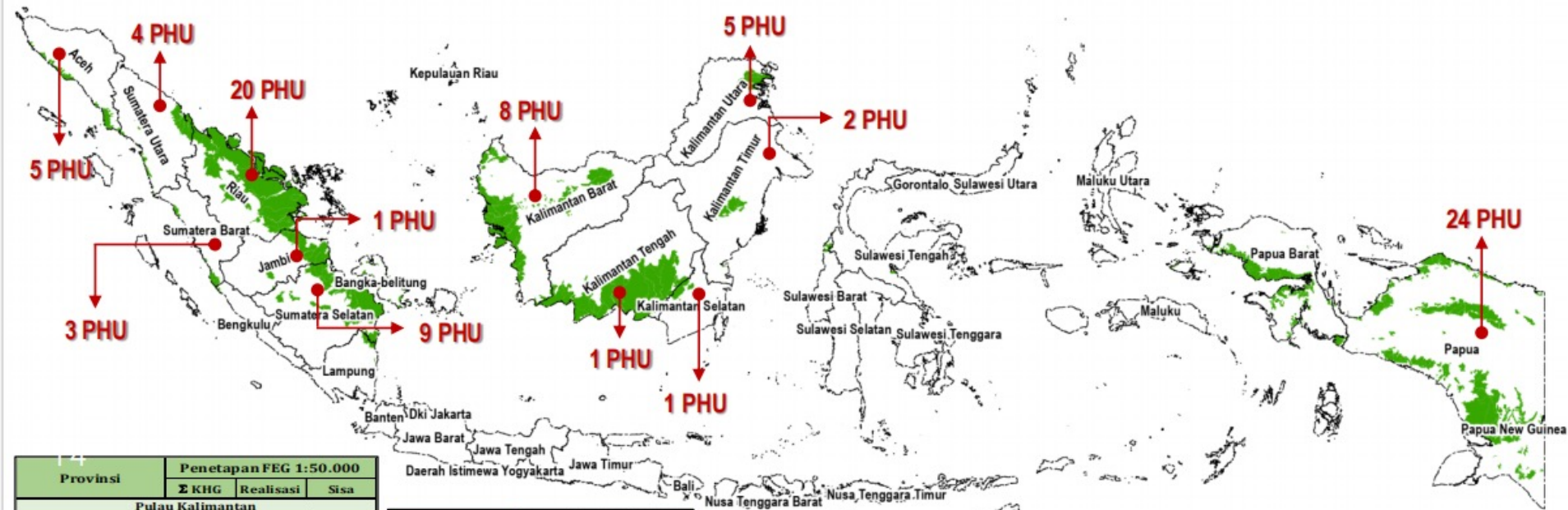
Peatland Ecosystem Characteristics Inventory Plan for 2023



Number of PHUs to be inventoried : **48 PHU**

Total area of PHU inventoried in 2023: **472.240 Ha** (non concession/permit)

Achievement of Peatland Ecosystem Function Stipulation Scale 1:50.000



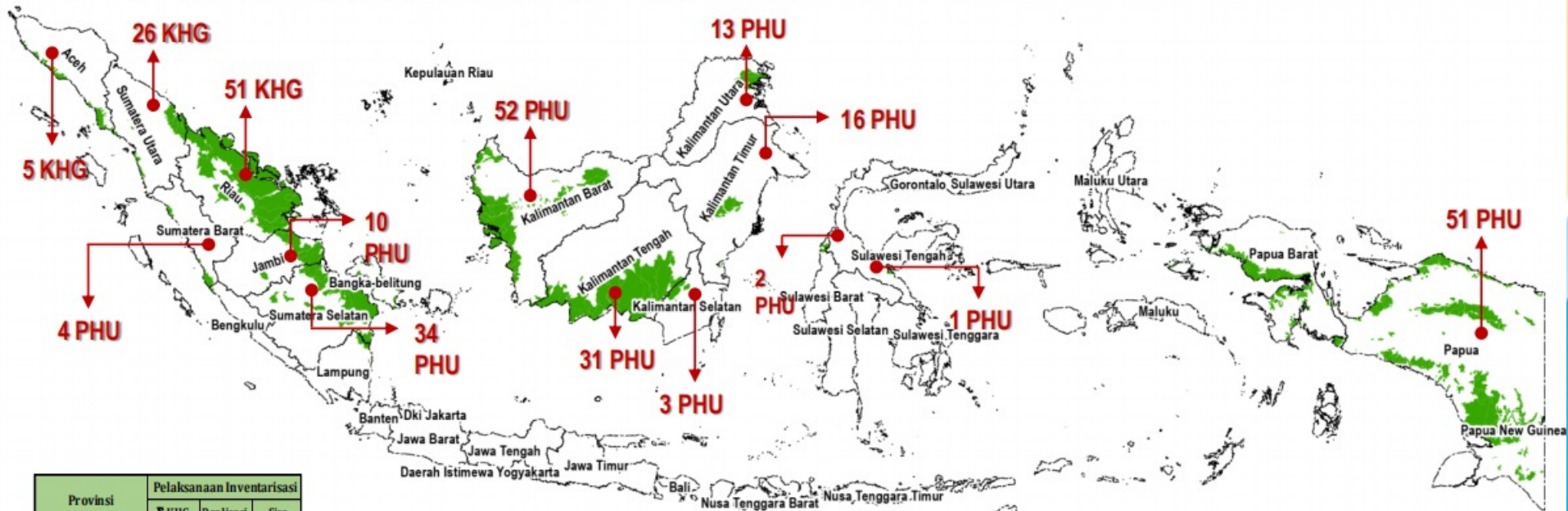
Provinsi	Penetapan FEG 1:50.000		
	Σ KHG	Realisasi	Sisa
Pulau Kalimantan			
Kalimantan Barat	124	20	104
Kalimantan Selatan	5	1	4
Kalimantan Tengah	35	4	31
Kalimantan Timur	16	2	14
Kalimantan Utara	13	5	8
Total Kalimantan	193	32	161
Pulau Sulawesi			
Sulawesi Barat	2	0	2
Sulawesi Tengah	1	0	1
Total Sulawesi	3	0	3
Pulau Papua			
Papua	250	24	226
Papua Barat	216	0	216
Total Papua	466	24	442

Provinsi	Penetapan FEG 1:50.000		
	Σ KHG	Realisasi	Sisa
Pulau Sumatera			
Aceh	36	5	31
Bengkulu	3	0	3
Jambi	13	1	12
Kep. Bangka-Belitung	17	0	17
Kep. Riau	5	0	5
Lampung	5	0	5
Riau	59	23	36
Sumatera Barat	14	3	11
Sumatera Selatan	34	11	23
Sumatera Utara	26	9	17
Total Sumatera	212	52	160

Remark:

- Stipulation PEF . 2015-2022 : 108 PHU
- Target PEF 2023 : 30 PHU
- Target of stipulation FEG 2024 : 25 PHU

Inventory Achievement on Peatland Ecosystem Characteristics in the Year 2015-2022



Provinsi	Pelaksanaan Inventarisasi		
	Σ KHG	Realisasi	Sisa
Pulau Sumatera			
Aceh	36	5	31
Bengkulu	3	0	3
Jambi	13	10	3
Kep. Bangka-Belitung	17	0	17
Kep. Riau	5	0	5
Lampung	5	0	5
Riau	59	56	3
Sumatera Barat	14	4	10
Sumatera Selatan	34	34	0
Sumatera Utara	26	26	0
Total Sumatera	212	135	77

Provinsi	Pelaksanaan Inventarisasi		
	Σ KHG	Realisasi	Sisa
Pulau Kalimantan			
Kalimantan Barat	124	56	68
Kalimantan Selatan	5	2	3
Kalimantan Tengah	35	31	4
Kalimantan Timur	16	16	0
Kalimantan Utara	13	13	0
Total Kalimantan	193	118	75
Pulau Sulawesi			
Sulawesi Barat	2	2	0
Sulawesi Tengah	1	1	0
Total Sulawesi	3	3	0
Pulau Papua			
Papua	250	51	199
Papua Barat	216	0	216
Total Papua	466	51	415

Total inventoried area in the year 2015-2022:
14.957.488 Ha (61,72 %)

Remark:

- PHU Inventory 2015-2021 : 271 PHU
- IPHU Inventory 2022 : 23 PHU
- Total (2015-2022) = 294 PHU



UN Decade on
Ecosystem
Restoration 2021–2030

Restoration of hydrological function Rehabilitation vegetation



*Concessions
Area*

Community area

51.325 hectares have been restored through rewetting, rehabilitation and revegetation, and Improve community livelihood.

<i>Until December 2022</i>	Forest Plantation	Palm Oil Plantation	Total
company	73	243	316
Areas of Peatland Ecosystem Restoration (ha)	2.268.199,70	1.439.224,58	3.707.424,27
of compliance point for monitoring of peat water level (unit)	5.086	5.700	10.786
Rainfall Station (unit)	269	657	926
Constructed canal blockings (unit)	8.081	20.267	28.348
Rehabilitation and Revegetation for secondary forest [ha]	64.244,42 ha	-	64.244,42 ha
Area of Vegetation Rehabilitation (replanting) - burnt area [ha]	27.230,35 ha	9.155,52 ha	36.385,87 ha

Peatland Monitoring Tools



AUTOMATIC WATER LEVEL REGULATOR IN A CONCESSION AREAS (PULP WOOD PLANTATION)



**CANAL BACKFILLING IN EX. PLG 1
MILLION HECTARES PROJECT,
CENTRAL KALIMANTAN (PUPR)**

**CANAL BACKFILLING TYPE 15 M
(LENGTH 250 M)**



**CANAL BACKFILLING TYPE 12 M
(LENGTH 250 M)**





**CANAL BACKFILLING WITH COCONUT
WOOD CONSTRUCTION TYPE 25 M
(LENGTH 50 M)**



**CANAL BACKFILLING IN EX. PLG 1
MILLION HECTARES PROJECT,
CENTRAL KALIMANTAN (PUPR)**



Fire Danger Rating Sign Board was installed nearby constructed canal blockings and agroforestry demonstration plot SMPEI 2021

The

SiMATAG-0.4m

CANAL
BLOCKING

MANUAL
GWL
MONITORING

DATA
LOGGER

RAINFALL
STATION

PPKL-PKG
KEMENTERIAN LINGKUNGAN HIDUP DAN KHUTANAN

SiMATAG-0.4m

Sistem Informasi Muka Air Tanah Gambut

Layer Evaluasi Kontak

- Peta Satelit
- Peta Kawasan Hidrologis Gambut
- Peta Fungsi Ekosistem Gambut

PPKL-PKG
KEMENTERIAN LINGKUNGAN HIDUP DAN KHUTANAN

SiMATAG-0.4m

Sistem Informasi Muka Air Tanah Gambut

Layer Evaluasi Kontak

- Peta Satelit
- Peta Kesatuan Hidrologis Gambut
- Peta Fungsi Ekosistem Gambut
- IUPHHK-Hutan Tanaman Industri
 - Batas Konsesi
 - Titik Produksi
 - Titik Penataan TMAT
 - Manual
 - Data Logger
 - Stasiun Curah Hujan
 - Infrastruktur Pembasahan
 - Pemulihan Vegetasi
- Perkebunan

PPKL-PKG
KEMENTERIAN LINGKUNGAN HIDUP DAN KHUTANAN

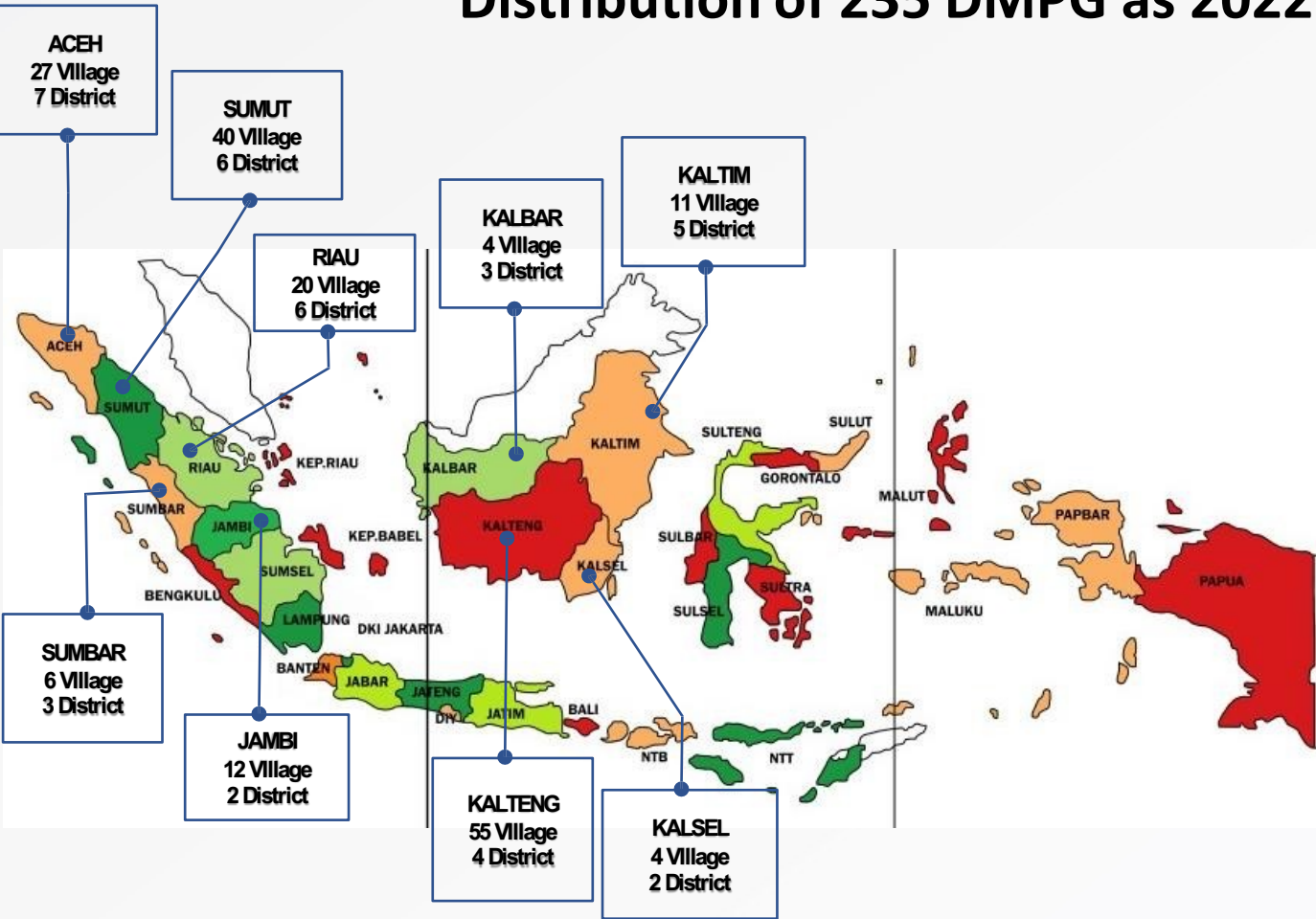
SiMATAG-0.4m

Sistem Informasi Muka Air Tanah Gambut

Layer Evaluasi Kontak

- Infrastruktur Pembasahan
- Pemulihan Vegetasi
- Perkebunan
- Automatic Data Logger
- Kambuh Lapangan

Distribution of 235 DMPG as 2022



DMPG Implemented on :

- 9 Province
- 38 District
- 222 Village

Consists of **12.676 worker**

- Man **8.963** ♂
- Female **3.713** ♀

Revegetation and improving livelihood: *agroforestry, agrosilvofishery*

Implementation on 2023 :
60 Village in 9 Province

Self-Sustaining Peatland Protecting Villages (DMPG)



CENTRAL KALIMANTAN

- Purun crafts
- Honey bee
- Pineapple cultivation
- Beje pond



SOUTH KALIMANTAN

- Goat Farming
- Purun Knitting
- Purun Farming



SOUTH SUMATERA Cows Farming Floating Cages



WEST KALIMANTAN Goat Farming Revegetation Floating Cages



ACEH Revegetation

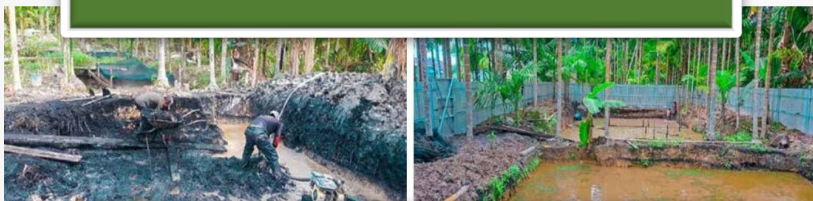


NORTH SUMATERA Revegetation Fish farming Stick Plate Crafts Cal Blocking

PROGRAM ACTIVITIES IN RAMBAIAN VILLAGE, RIAU PROVINCE



TRIGONA SP HONEY BEE CULTIVATION TRAINING.



FISH CULTIVATION TRAINING



ANOTHER FUNCTION OF CANAL BLOCKING IS IN TRANSPORTING THE COMMUNITY'S COCONUT HARVEST



EDUCATION ABOUT PROTECTION AND MANAGEMENT OF PEATLAND ECOSYSTEM TO THE YOUNGER GENERATION

Revitalization –Teluk Dawan Village

State	Implementation of term 3 (finished)
Activity	<ol style="list-style-type: none">1. Goat farming2. Rainbow donut bussiness
Budget	<ol style="list-style-type: none">1. Rp 128.204.0002. Rp 71.796.000
Output	<p>Term 1</p> <ul style="list-style-type: none">• Procurement of rainbow donut business equipment• Construction of a goat pen, dimension 5 m x 6 m <p>Term 2</p> <ul style="list-style-type: none">• Procurement of 20 female etawa goat• Procurement of 4 male etawa goat• Procurement of 100 kg odot grass• Procurement of equipment <p>Term 3</p> <ul style="list-style-type: none">• Procurement of raw materials for making donuts• Procurement of odot grass 680 kg• Final report of activities



Donut production has been carried out with a daily turnover of approximately Rp. 400.000,-

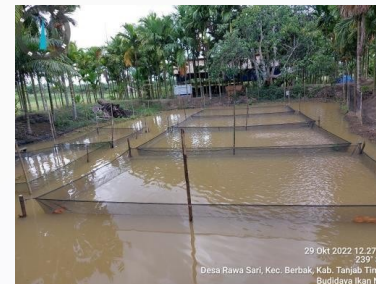
Revitalization –Kandis Dendang Village

State	Implementation of term 2
Activity	<ol style="list-style-type: none"> 1. Demonstration plot of pineapple, areca nut, coffee and ginger 2. Goat farming 3. Ginger powder drink 4. Coconut shell crafts
Budget	<ol style="list-style-type: none"> 1. Rp 91.770.000 2. Rp 76.975.000 3. Rp 11.879.000 4. Rp 19.376.000
Output	<p>Term 1</p> <ul style="list-style-type: none"> • Preparation of demonstration plot area 1 Ha • Purchase pineapple, areca nut, coffee and ginger seeds • Construction of work huts, sized 4 m x 4 m • Seeding 323 stems of odot grass <p>Term 2</p> <ul style="list-style-type: none"> • Purchase of 7 female goats • Construction a cage measuring 3 m x 6 m • Sowing 77 stalks of odot grass



Revitalization – Rawa Sari Village

State	Implementation of term 3
Activity	<ol style="list-style-type: none"> 1. Joper chicken farming 2. Tilapia cultivation
Budget	<ol style="list-style-type: none"> 1. Rp 121.000.000 2. Rp 79.000.000
Output	<p>Term 1</p> <ul style="list-style-type: none"> • Construction of a chicken coop measuring 17 m x 4 m • Purchase of 1,000 chicken seeds • Procurement of 10 sacks of chicken feed • Making 15 pool nets measuring 4 m x 6 m • Purchase of 10,000 tilapia fish seeds • Procurement of 100 kg of tilapia fish feed <p>Term 2</p> <ul style="list-style-type: none"> • Purchase of 1,000 chicken seeds • Procurement of 20 sacks of chicken feed • Procurement of equipment to support chicken farmin • Purchase of 10,000 tilapia fish seeds Procurement of 500 kg of tilapia fish feed



Revitalization – Loderang Village

State	Implementation of term 3
Activity	Cultivating tilapia using floating cage systems
Budget	Rp 200.000.000
Output	<p>Term 1</p> <ul style="list-style-type: none">• Construction of 14 fish cage units• Procurement of supporting equipment for biofloculation ponds• Procurement of kepok banana equipment <p>Term 2</p> <ul style="list-style-type: none">• Purchase of 18,000 tilapia fish seeds• Purchase of 2,200 toman fish seeds• Procurement of tilapia and toman fish feed <p>Term 3</p> <ul style="list-style-type: none">• Procurement of tilapia and toman fish feed



SDGs Related to Peatlands Ecosystem



1 NO POVERTY

No Poverty
To end poverty in all its forms everywhere by 2030

8 DECENT WORK AND ECONOMIC GROWTH

Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Ensure sustainable consumption and production pattern

13 CLIMATE ACTION

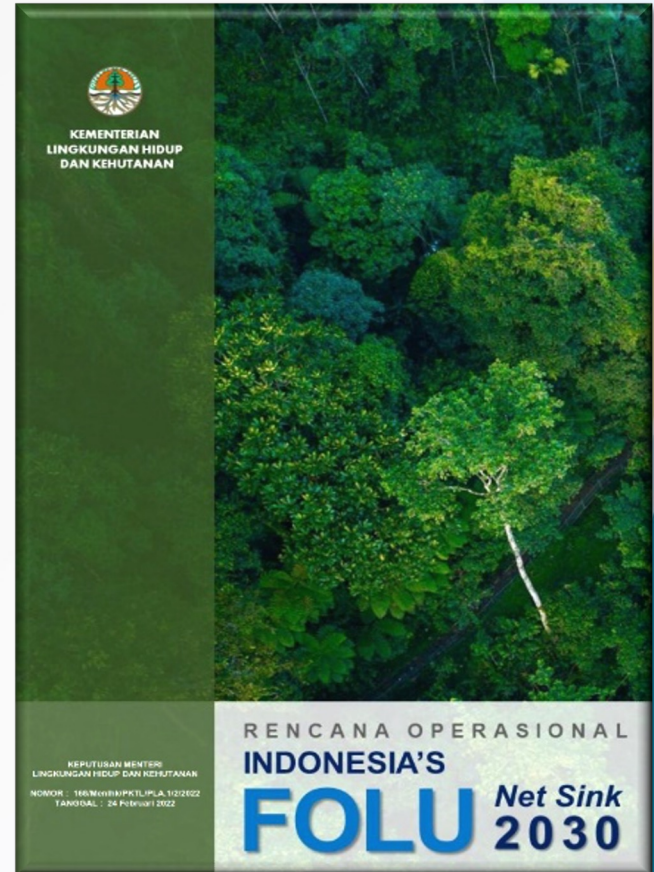
Take urgent action to combat climate change and its impacts
Preventing Forest Fire

15 LIFE ON LAND

Protect, restore, and promote sustainable use of peatlands ecosystem, sustainable manage forest, combat desertification, halt and reverse land degradation, and halt biodiversity loss.

INDONESIA COMMITMEN In FOLU SECTOR

- At the UNFCCC COP-26 Glasgow : Indonesia increased ambitious targets with the support of international technical cooperation. Indonesia's commitments are contained in the Updated Nationally Determined Contribution (NDC) and *Long-Term Strategies for Low Carbon and Climate Resilience (LTS-LCCR 2050)* documents.
- Sector targets: FOLU (Forest and Other Land Use) : Net Sink by 2030 (the level of uptake in the FOLU sector is balanced or higher than the level of emissions)
- Target for all sectors: carbon neutral/net-zero emission by 2060 or sooner.
- Minister of Environment and Forestry Decree No. 168/2022, 24 February 2022 on Indonesia's Forestry and Other Land Use (FOLU) Net Sink 2030 for Climate Change Control.

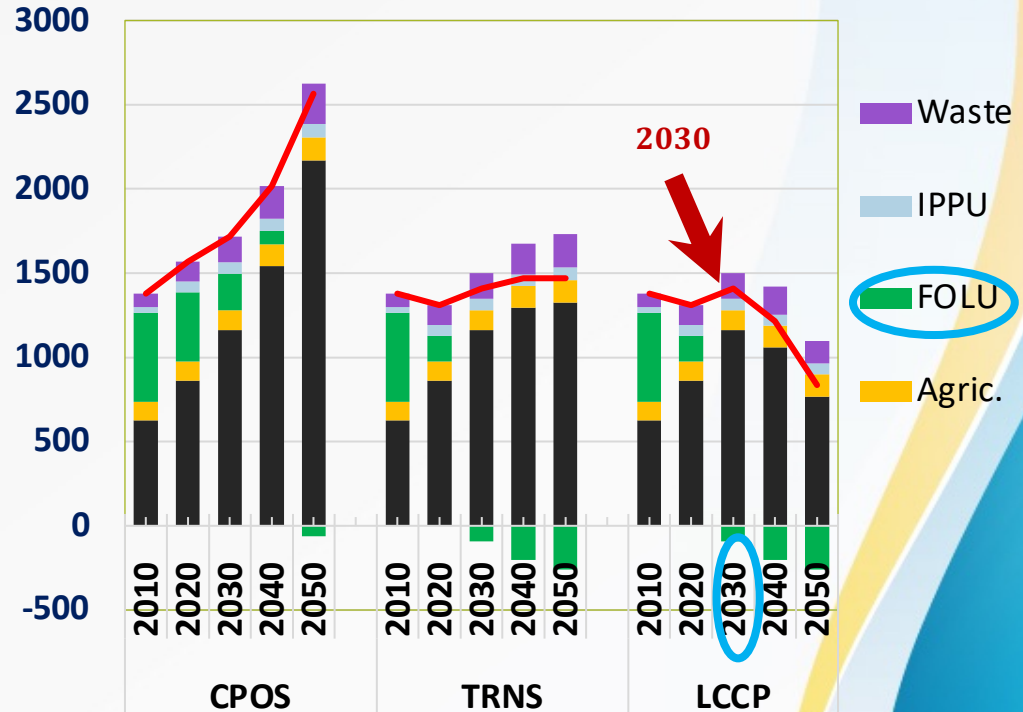


FOLU SECTOR MITIGATION SCENARIO

- Extended NDC/ Current Policy Scenario (**CPOS**)
- Transition Scenario (**TRNS**) → Energy Sector
- Low Carbon Scenario Compatible (**LCCP**) with Paris Agreement target

LCCP

Peaking 2030 With
Net Sink on FOLU
sector (Scenario
LCCP)



GHG emission scenario CPOS, TRNS and LCCP

- Law No.16 of 2016 on the Ratification of the Paris Agreement To The United Nations Framework Convention On Climate Change (Paris Agreement To The United Nations Framework Convention On Climate Change)
- NDC document submitted by Indonesia to the UNFCCC Secretariat

PROJECTED BAU AND EMISSION REDUCTION FROM EACH SECTOR CATEGORY

Indonesia submits Enhanced NDC to the UNFCCC Secretariat by 23 September 2022 with increased emission reduction target from 29% in First NDC and Updated NDC to 31.89% unconditionally and from 41% in the Updated NDC to 43.20% conditionally

Sector	GHG Emission Level 2010* (MTon CO ₂ -eq)	GHG Emission Level 2030			GHG Emission Reduction				Annual Average Growth BAU (2010-2030)	Average Growth 2000-2012
		MTon CO ₂ -eq			MTon CO ₂ -eq		% of Total BAU			
		BaU	CM1	CM2	CM1	CM2	CM1	CM2		
1. Energy*	453.2	1,669	1,311	1,223	358	446	12.5%	15.5%	6.7%	4.50%
2. Waste	88	296	256	253	40	43.9	1.4%	1.5%	6.3%	4.00%
3. IPPU	36	69.6	63	61	7	9	0.2%	0.3%	3.4%	0.10%
4. Agriculture	110.5	119.66	110	108	10	12	0.3%	0.4%	0.4%	1.30%
5. Forestry and Other Land Uses (FOLU)**	647	714	214	-15	500	729	17.4%	25.4%	0.5%	2.70%
TOTAL	1,334	2,869	1,953	1,632	915	1,240	31.89%	43.20%	3.9%	3.20%

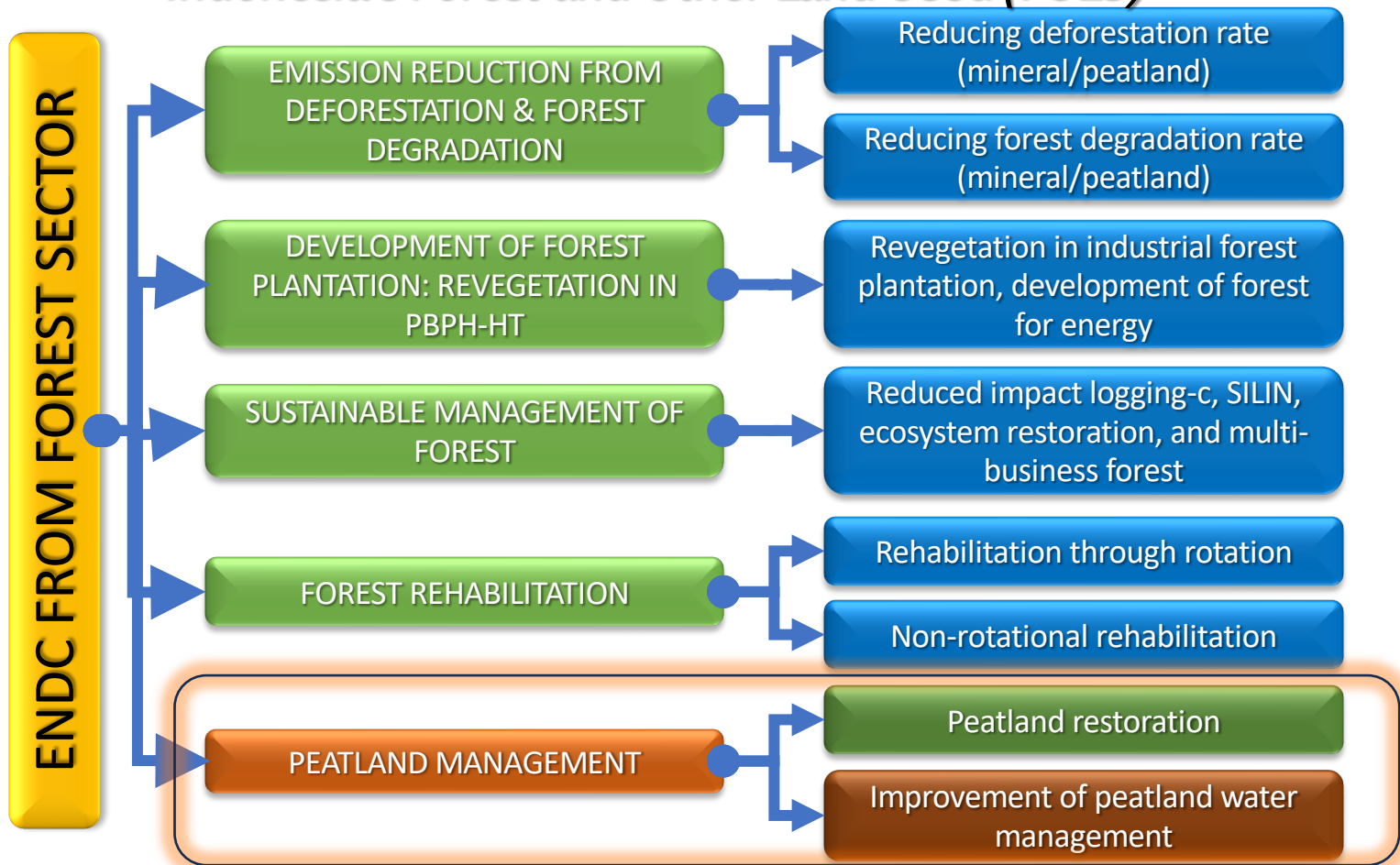
Note: *Including fugitive **Including peat

CM1 = Counter Measure (unconditional mitigation scenario)
 CM2 = Counter Measure (conditional mitigation scenario)

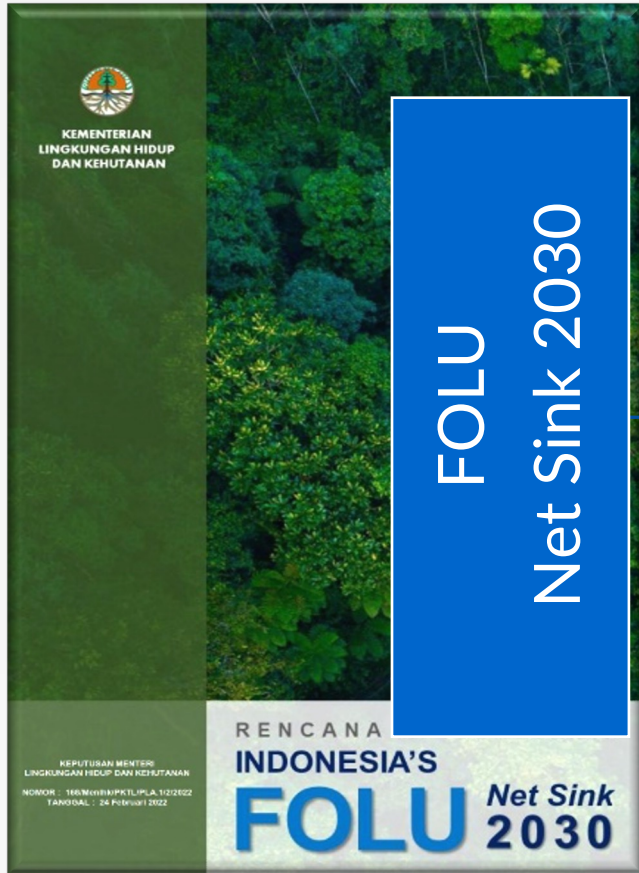
The Forestry sector has the BIGGEST share in the greenhouse gas emission reduction target:

60%

5 MAIN MITIGATION ACTIONS FOR *Indonesia's Forest and Other Land Used (FOLU)*



Modalities of FOLU Net Sink 2030



FOLU
Net Sink 2030

Sustainable Forest
Management

Environmental Governance

Carbon Governance

Thank you
ありがとう

