DESIGNING LOW CARBON DEVELOPMENT IN INDONESIA

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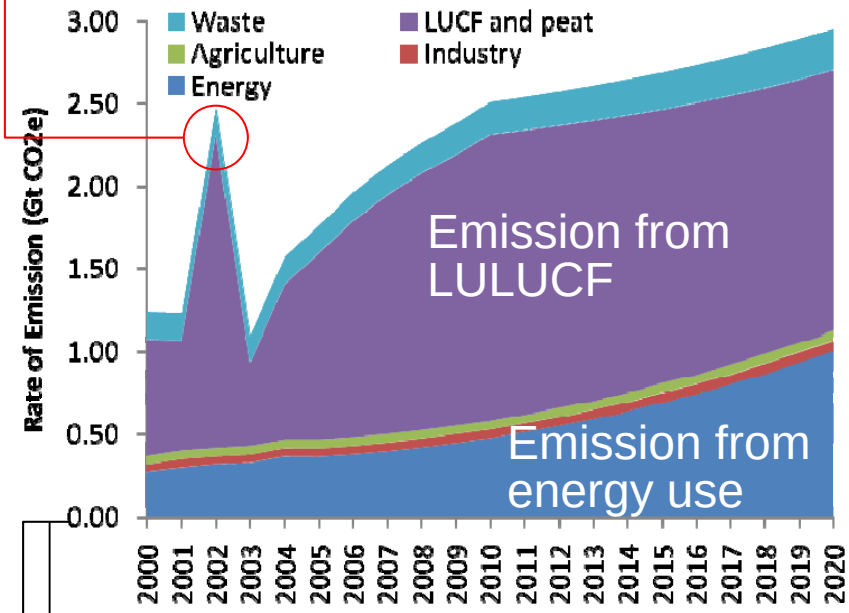
Background

- Indonesia is one of the world's 10 largest GHG emitters:1,377 MTon CO2eq (2000) and 1,991 MTon CO2-eq (2005) → growth rate 5.7%/year;
- More than half the total national emission was from LULUCF and peat fire, while energy is the second with contribution of about 20%
- Under the BAU, until 2020 LULUCF is still major source of emissions, however the contribution of energy sector is increasing

Big peat Fire and high deforestation

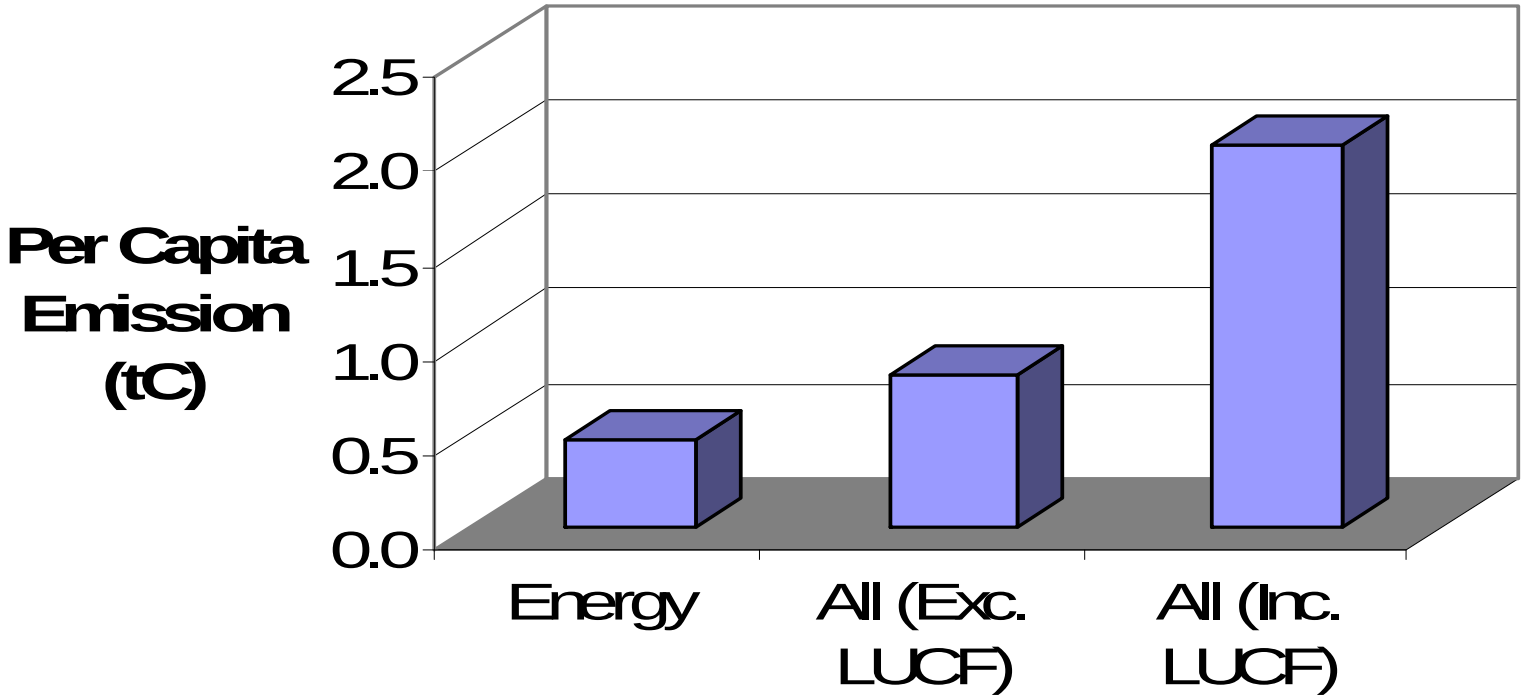


Presidential Regulation 61/2011 on National Action Plan for GHG mitigation

Presidential Regulation 71/2011 on National GHG Inventory System

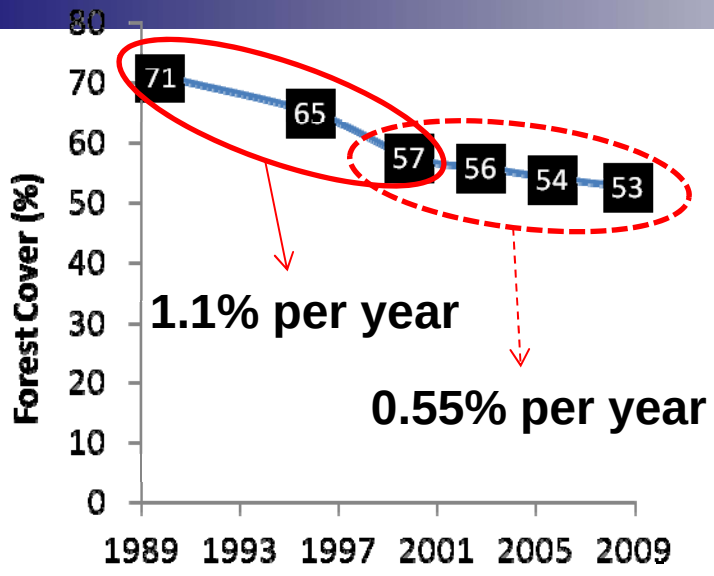
Indonesian Strategies toward LCD

- Indonesia will put priority for reducing emission from **LULUCF** and followed with **energy** sector, and other sectors

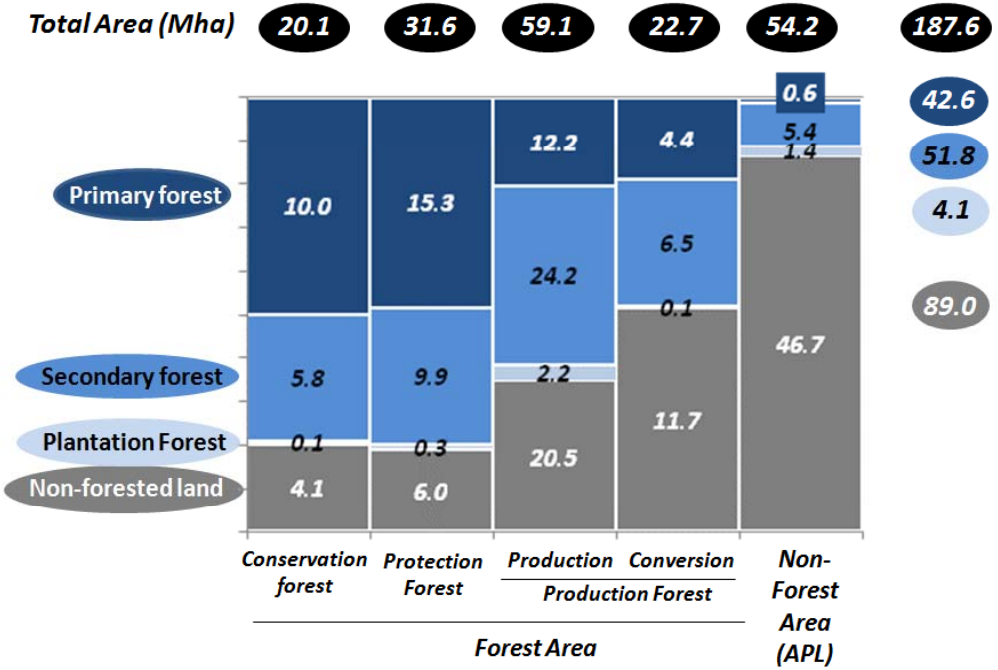


- This will focus only on LULUCF sector

FOREST CONDITION



Based on Ditjenplan, 2011



- The highest deforestation occurred in production forest.
- In 2009, remaining forest cover was 52%, and more than half were secondary forest with various level of degradation

FIVE KEY STRATEGIES FOR REDUCING EMISSION FROM LULUCF SECTOR

Strategy 1: Improving institutional system for managing forest resources, through the establishment of forest management unit (FMU) in all forest areas

The urgency of FMU establishment:

- Management of forest resources given to the private sector through the licensing mechanism for forest (IUPHH) has limited time
- Nature of the transfer of rights to holders of the license required close monitoring from government over the behavior of the license holders.
- The needs of having intensive forest manager in site level
  - Increasing successfulness of land rehabilitation programs (GERHAN)
  - Accelerating the implementation of CBFM (HTR, HkM, HD)

FMU ESTABLISHMENT PLANNING

- Target on the establishment of FMU
  - In the Strategic Plan of Ministry of Forestry for 2010-2014 (MoF, 2010): 60 units within the 5 years period
  - In RAN GRK (Bappenas, 2011): Target was increased to 120 units within the 5 years period.
- With total number of 600 FMUs for all Indonesia, the time required to complete the establishment of FMU all over Indonesia would be 25 years
- Estimated cost for establishing one FMU to be function effectively in 5 years about 40 billion IDR. Thus total cost for establishing all FMUs is 24 trillion IDR or 2.7 billion USD
- There are support from international development agencies in realizing in implementing this strategy

Strategy 2: Introducing mandatory forest certification systems

- For limiting trading of illegal logs and pushing adoption of sustainable management practices in production forests, GoI introduce mandatory certification system in addition to voluntary certification system (*Minister of Forest Regulation Number P.38/Menhut-II/2009*):
  - PK-PHPL (SFM Certification) is mandatory for all permit holders in state forests and private forests (Hutan Milik) and
  - SVLK (Log Legality) is mandatory for all permit holders in state forests (IUPHHK-HA, IPPHHK-HT, IUPHHK-RE, HKm, and HTR), private forests (Hutan Rakyat or HR), and all upstream and downstream wood industries (IUIPHHK)

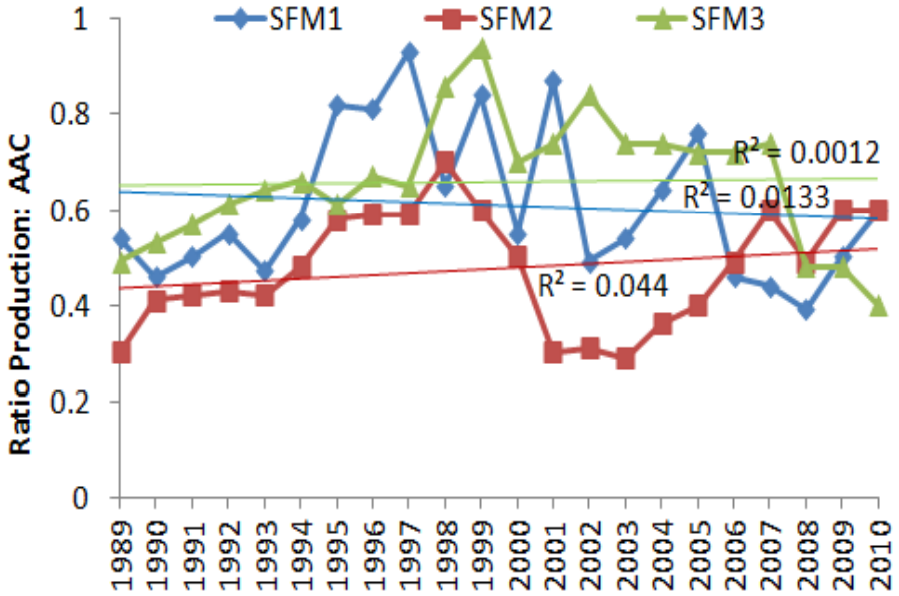
Adoption of Forest Certification

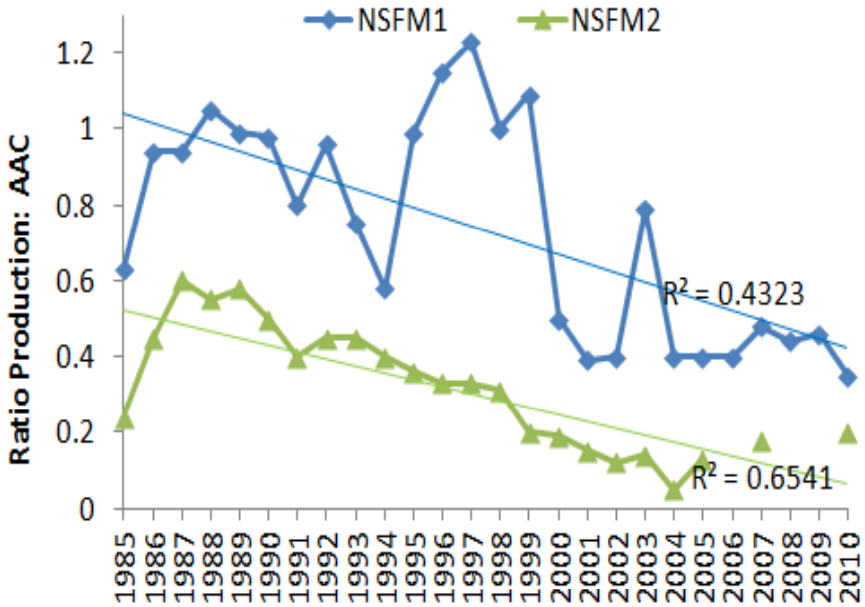
Category	Total Concession Area (ha)[1]	Mandatory Certificates (up to June 2011)[2]		Voluntary Certificates (up to June 2011)[3]	
		Number	Area (ha)	Number	Area (ha)
IUPHHK-HA	22,710,256	140	14,225,443	5	834,452
- Very good-good	*na*	*31*	*3,449,955*	*na*	*na*
- Average	*na*	*35*	*3,307,789*	*na*	*na*
- Poor or expire	*na*	*74*	*7,467,699*	*na*	*na*
IUPHHK-HT	9,963,770	90	4,914,301	3	544,705
- Good	*na*	*19*	*2,499,280*	*na*	*na*
- Expire	*na*	*71*	*2,415,021*	*na*	*na*
HR	1,570,315	Na	na	17	242,931

Source: [1]Ditjen BUK (2011), [2]Bahruni (2011), and [3]Rusolono and Tiryana (2011)

There is a significant increase number of concessions being certified after the issuance of the regulation. Giving time for entity to improve their performance

Forest Degradation





Time period	The rate of degradation (%)		
	SFM	Non SFM	Difference SFM & Non SFM
1992-2011	0.37	2.35	1.98
2000-2011	0.17	2.61	2.44
The Benefit of SFM		1992-2011	2000-2011
The reduction of loss stand (m^3/ha-yr)		1.85	2.28
The reduction of emission forest carbon (tC/ha-yr)		2.16	2.66
The reduction of emission forest carbon (tCO2/ha-yr)		7.93	9.76

Source: Bahruni, 2011

Introducing Emission Caps

- Government of Indonesia is also in the process of drafting *Government Regulation of Protecting Atmosphere Function* (*PP Perlindungan Fungsi Atmosphere*)
  - All entities obliged to have Environmental Impact Assessment (EIA) would be requested to assess level of GHG emission released from their business activities if all related rules and regulations to environmental management is well implemented ~ as '*Emission Cap*'
  - Entities that release more than the allowable emissions (emission cap) shall offset the excess

Strategy 3: Reducing Dependency on Natural Forests for Wood Supply and Sink Enhancement

- Increasing contribution of forest plantations for timber supply
  - Targeted by 2030 to increase large timber plantation from 9.4 million ha to 15.9 million hectares (RKTN; MoF, 2011)
  - Targeted by 2014 to establish 7.2 million hectares of CFM (Sub-Direktorat HKm, HD dan HTR Kemenhut RI 2010)
- Sink enhancement
  - Targeted by 2030 to rehabilitate 11.6 million ha of degraded land in forest area (planting rate at least 580 thousand hectare per year ~ between 2003-2008 it was only 300 thousand hectare per year
  - Restoration of production forest ecosystem (IUPHHK-RE)

Potential Area for Restoration of Production Forest Ecosystem (Purnama & Daryanto 2006)

Category	Production Forest Condition	Area (million ha)
1	Production forests with good condition and now are still under management of concessionaires (IUPHHK-HA)	28.27
2	Production forests with relatively good condition and open access (no concessionaires operates in the area)	12.98
3	Production forest with medium level of degradation and open access (no concessionaires operates in the area)	7.14
4	Production forest with high level of degradation and have been allocated for establishment of timber plantation	9.13
TOTAL		57.52

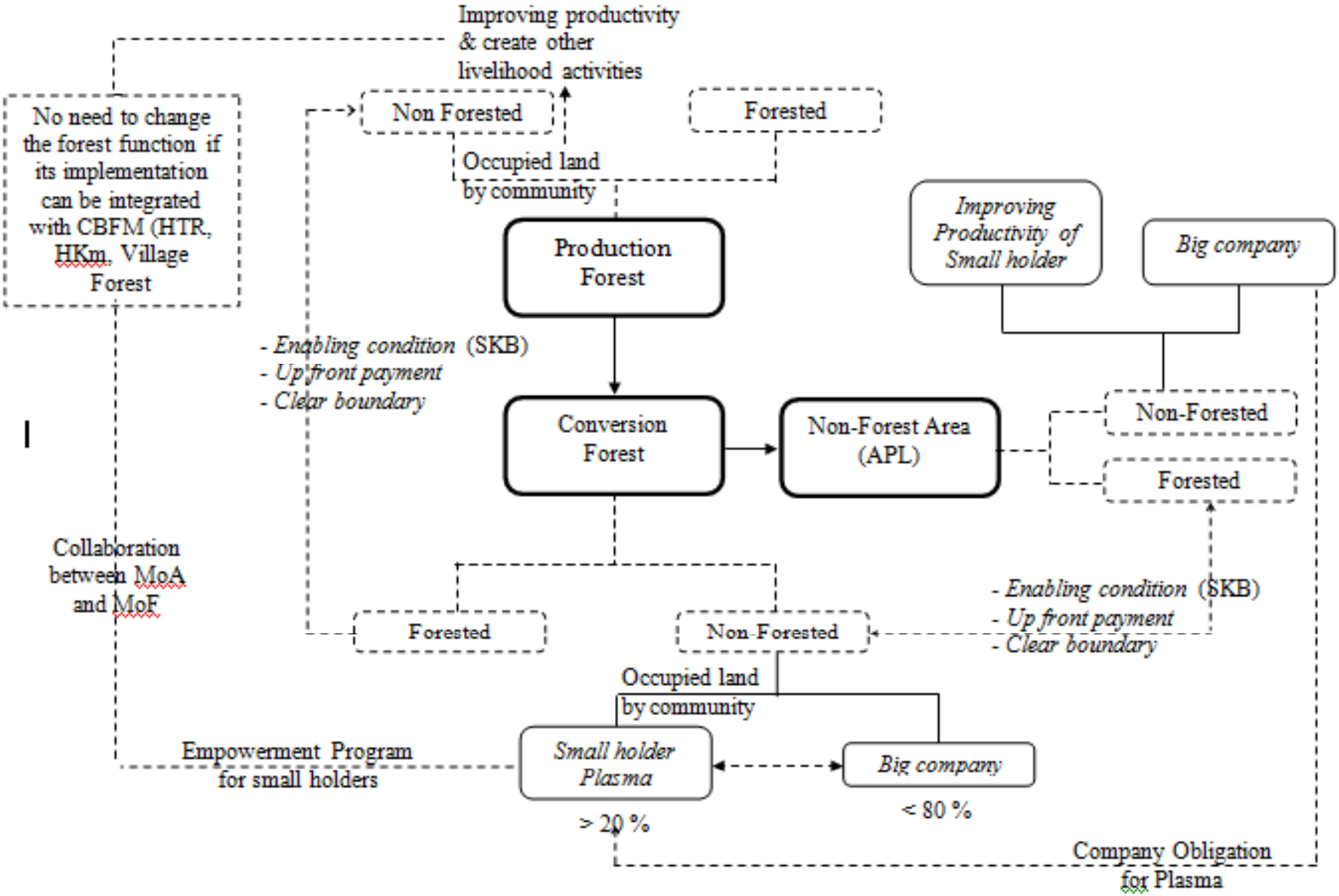
Potential for ecosystem restoration

Realization of IUPHHK-RE is very low. There is need to ***restructure the regulations*** on forest ecosystem restoration considering that (i) ecosystem restoration business is not profit-oriented business so that the treatments should be different from IUPHHKHA, (ii) IUPHHK-RE actually carry out government obligation in restoring, conserving and preserving forests that nearly have no beneficial products

Strategy 4: Reducing pressure on Natural Forest by Optimizing Land Use, Improving Land Productivity and Community Livelihood and land swap

- Enforcing plantation companies to engage community in their plantation as plasma farmers, i.e. at least 20% of the plantation area (Minister of Agriculture Regulation No. 26/Permentan/OT.140/2/2007)
- With the issuance of ISPO, Agriculture Plantation company is obligued to establish partnership with small farmers (equivalent to at least 20% of the total area of the plantation)
- Changing forest function and optimizing the use of non-forested land for agriculture activities. More than 10 Mha of land in convertible production forest (conversion forest) are forested land, while about 20 Mha land in Production forests are non-forested land

Land swap policy and integration of community empowerment programs from various sector and private (CSR)



Strategy 5: Issuing Financing and Incentive Policies for Supporting the Implementation of the four strategies

- Ministry of Finance, Ministry of Agriculture and Ministry of Forestry are in the process of evaluating proposals for issuing financing and incentive policies
  - Incentive policies for the certification system
  - Financing and incentive policy for accelerating the establishment of timber plantation on degraded land and CFM for sink enhancement
  - Incentive and financing policies for conserving forest carbon and land swap

Incentive policies for the certification system

- Expanding type of incentive for small business entities in getting certification ~ Increasing competitiveness of their products (wood product from illegal timber is much cheaper)
- Providing subsidy for business entities focusing on ***production forest ecosystem restoration*** in having the mandatory certification.
- Providing incentive for plantation companies in getting lands for plasma farmers as support for the company in meeting certification obligations

Financing and incentive policy for accelerating the establishment of timber plantation on degraded land and CFM for sink enhancement,

- Incentive system for permit holders in handling land conflict problem and types of the incentive may be varied depending on level of conflicts (e.g. reducing or exemption of administration/retribution fees for certain period of time)
- Simplifying the process of getting permit and accessing fund by community for supporting CBFM from the BLU-P3H. Funding available for this is more than 1 billion USD

Incentive and financing policies for conserving forest carbon and land swap (Nurrochmat, 2011)

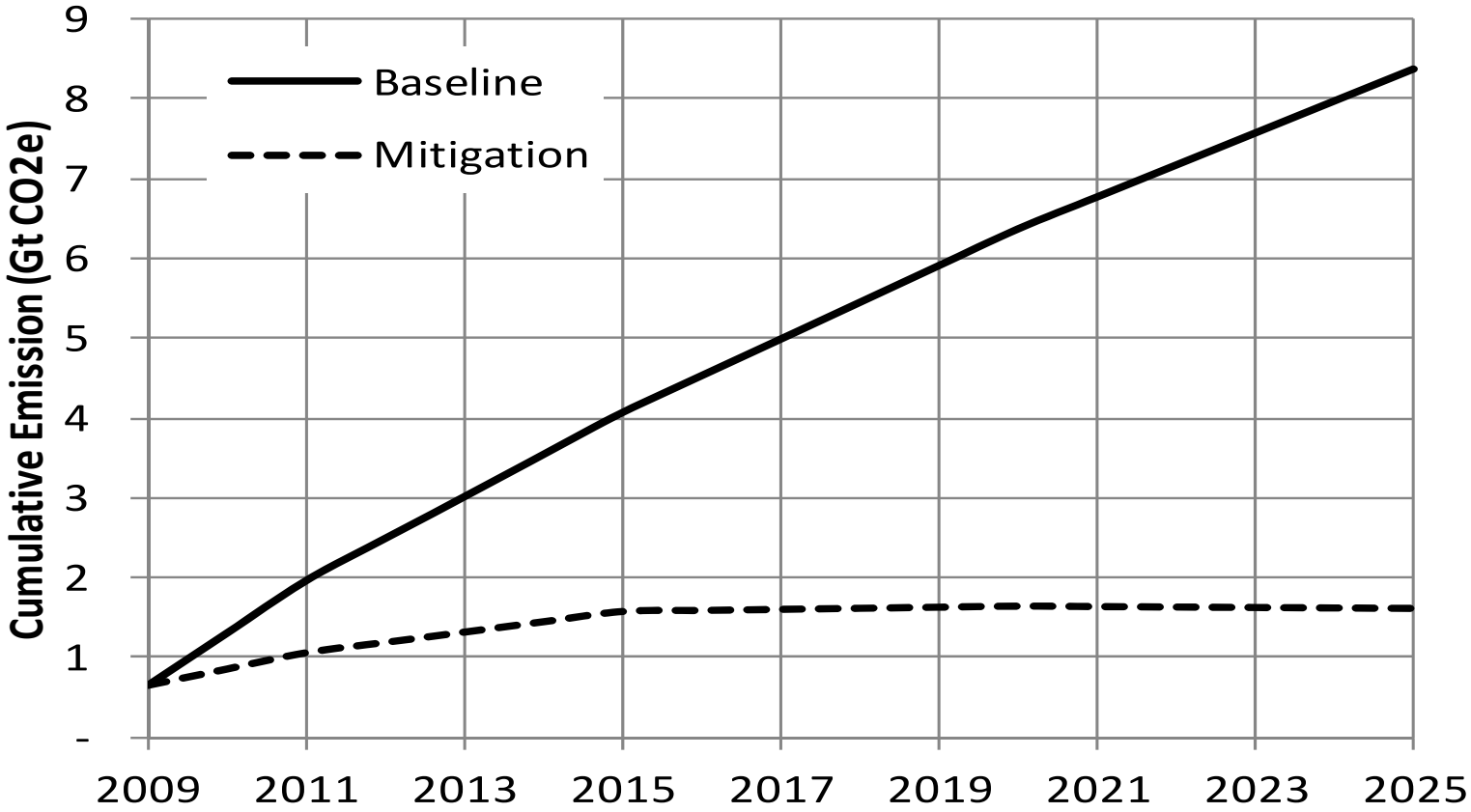
- Special allocation fund (Dana Alokasi Kusus, DAK) for local governments for forest conservation
- Revision of fiscal balance law to enforcing “liability rule”. Current policy, the higher the volume of the natural resources extracted by a certain region, the bigger benefit sharing received by the region ~ Green fiscal balance shall give a proportional attention both in environment and economic side to ensure the sustainability of nature resources management

Mitigation Scenario (2012-2025)

	BAU	Mitigation
Planned Deforestation (Mha)	10.272	5.136
Unplanned Deforestation (Mha)	8.772	5.169
Wood Production (Million m3)	297.58	292.62
Sink Enhancement (Mha)	8.08	15.2

Based on: Working Group on Forest Policy, 2010

Potential Emission Reduction



Cumulatively in the period between 2012 and 2025, total GHG emission reduction would reach 6.75 Gt CO_2. The potential emission can be achieved if all enabling conditions are in place: (i) FMUs being established can function effectively, (ii) lands for the implementation of sink enhancement are safe and conflict-free, (iii) good climate investment (e.g. consistency in policy and permit process, and credit access), and (iv) field facilitators/extension services for supporting community in implementing CFM available.

Concluding Remark

- Indonesia has big potential for reducing its emission from LULUCF sector.
- Key strategies to meet this potential
  - Accelerating the establishment of forest management units at site level (~ unplanned deforestation)
  - Increasing community access to financial resources for supporting forest-based management activities
  - Creating incentives system for private sectors to support sink enhancement program
  - Applying mandatory certification for private might reduce planned deforestation and degradation
  - Revising fiscal balance policies would push local governments to pay more attention on environment protection and management

THANK YOU