

インドネシア： 低炭素開発に向けた国内行動



DOMESTIC ACTIONS TOWARD LOW CARBON DEVELOPMENT: INDONESIA

Rizaldi Boer

Centre for Climate Risk and Opportunity
Management in South East Asia and Pacific
(CCROM SEAP)

Bogor Agriculture University
rizaldiboer@gmail.com

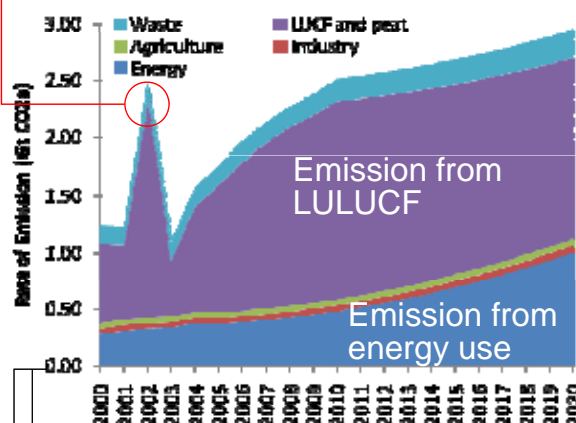


ボゴール農業大学 東南アジア・大洋州における気候リスク・機会管理センター
ボア・リザルディ

Background背景

- 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



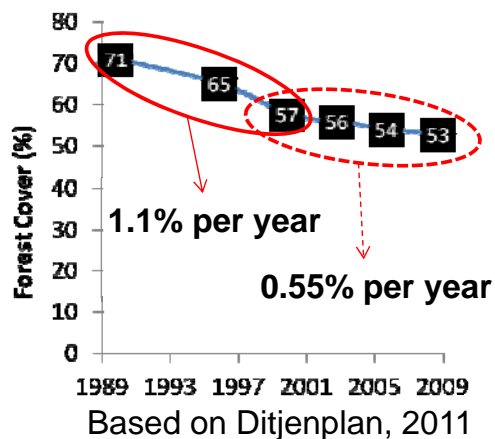
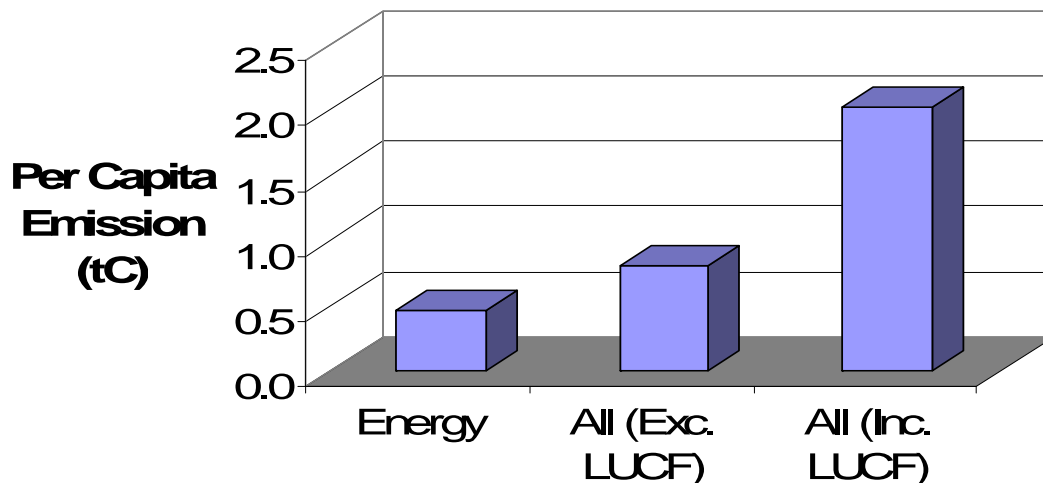
Presidential Regulation 61/2011
on National Action Plan for
GHG mitigation

Presidential Regulation 71/2011
on National GHG Inventory
System

Indonesian Strategies toward LCD

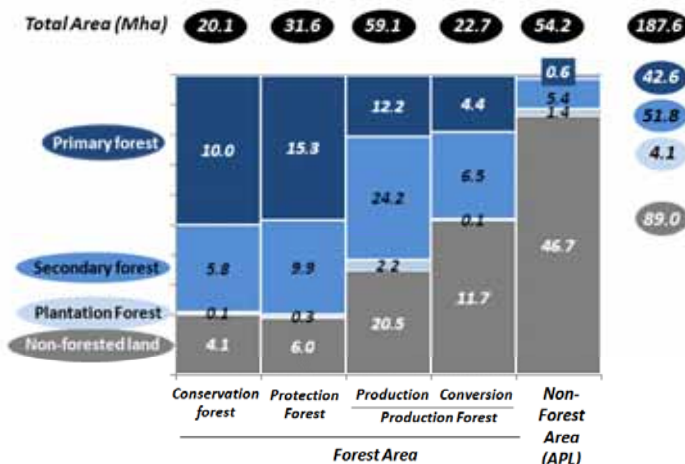
LCDに向けたインドネシアの戦略

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



FOREST CONDITION 森林の状況

- 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 and Action Plan

五つの主要戦略と行動計画

- Key policies and actions being implemented by Government of Indonesia in achieving sustainable forest management can be grouped into five different aspects
 1. **Improving** institutional system for managing forest resources, through the establishment of forest management unit (FMU) in all forest areas (required 600 FMUs, increase 12- 24 units/year, total cost 2.7 billion USD)
 2. **Introducing mandatory forest certification systems** for limiting trading of illegal logs and pushing adoption of sustainable management practices in production forests (*Minister of Forest Regulation Number P.38/Menhut-II/2009 and Minister of Agriculture Regulation No. 19/Permentan/OT.140/3/2011 on ISPO*).

Adoption of Forest Certification

森林認証の導入

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
- <i>Very good-good</i>	<i>na</i>	31	3,449,955	<i>na</i>	<i>na</i>
- <i>Average</i>	<i>na</i>	35	3,307,789	<i>na</i>	<i>na</i>
- <i>Poor or expire</i>	<i>na</i>	74	7,467,699	<i>na</i>	<i>na</i>
IUPHHK-HT	9,963,770	90	4,914,301	3	544,705
- <i>Good</i>	<i>na</i>	19	2,499,280	<i>na</i>	<i>na</i>
- <i>Expire</i>	<i>na</i>	71	2,415,021	<i>na</i>	<i>na</i>
HR	1,570,315	Na	<i>na</i>	17	242,931

Source: ¹Ditjen BUK (2011), ²Bahrani (2011), and ³Rusolono and Tiriyana (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



Introducing Emission Caps

排出上限の導入

- 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



Key strategies and Action Plan for REDD+

REDD+のための主要戦略および行動計画

- Key policies and actions being implemented by Government of Indonesia in achieving sustainable forest management can be grouped into five different aspects
 3. **Reducing dependency** on natural forests in meeting wood demands through accelerating establishment of timber plantation on community lands and state lands and enhancing sink through restoration of production forests ecosystem and land rehabilitation.
 4. **Reducing pressure on natural forest** through optimizing the use of land and improving land productivity, and
 5. **Issuing financing/incentive policies** and development of financing system to support the implementation of the strategies and plans.

Reduction of pressure on Natural Forest by Optimizing Land Use, Improving Land Productivity and Community Livelihood

土地利用の最適化、土地生産性と地域社会における暮らしの改善による天然林への圧力の低減

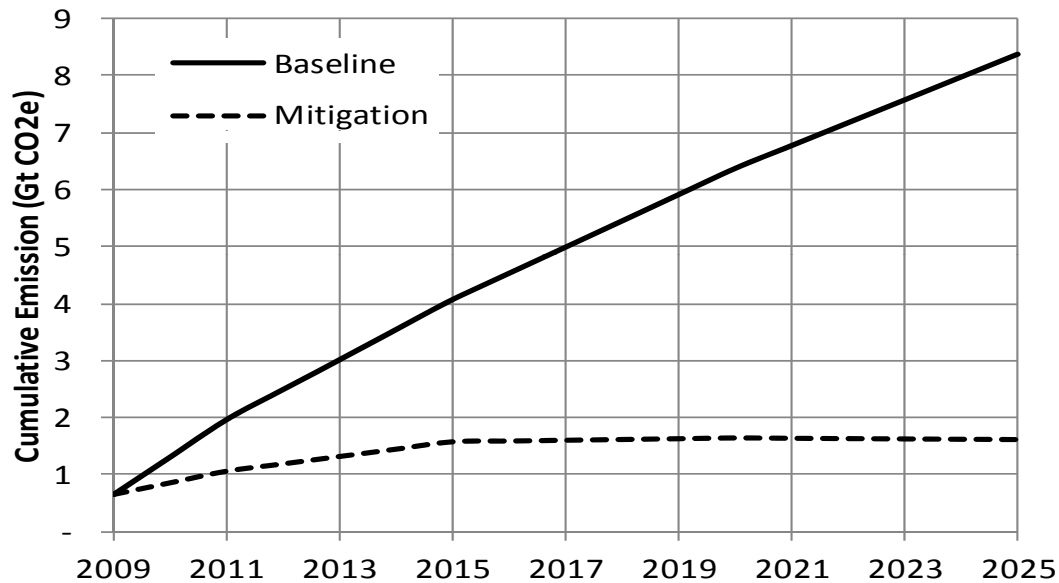
- Enforcing plantation companies to engage community in their plantation as plasma farmers (Minister of Agriculture Regulation No. 26/Permentan/OT.140/2/2007) ~ Agriculture plantation company is obliged to establish plasma plantation at least 20% of the total plantation area ~ under ISPO this mandatory for all, new and existing plantations
- Supporting small holder farmer to improve crop productivity ~ Development of synergy or integration of community empowerment programs from various sector and private (CSR)
- Changing forest function and optimizing the use of non-forested land for agriculture activities. More than 10 Mha of land in conversion forest are forested land, while about 20 Mha land in Production forests are non-forested land

Mitigation Scenario (2012-2025) 緩和シナリオ (2012年~2025年)

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

Based on: Working Group on Forest Policy, 2010

Potential Emission Reduction 排出削減の可能性




Cumulatively in the period between 2012 and 2025, total GHG emission reduction would reach 6.75 Gt CO₂. 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.

Proposed Financing and Incentive Policies for Supporting the Implementation of SFM and REDD+


提案されている持続可能な森林経営 (SFM) および REDD+実施のための資金・奨励 (インセンティブ) 政策

- 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



Proposed Financing and Incentive Policies for Supporting the Implementation of SFM and REDD+ 提案されているSFMおよびREDD+実施のための 資金・奨励政策

- 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 from the BLU-P3H

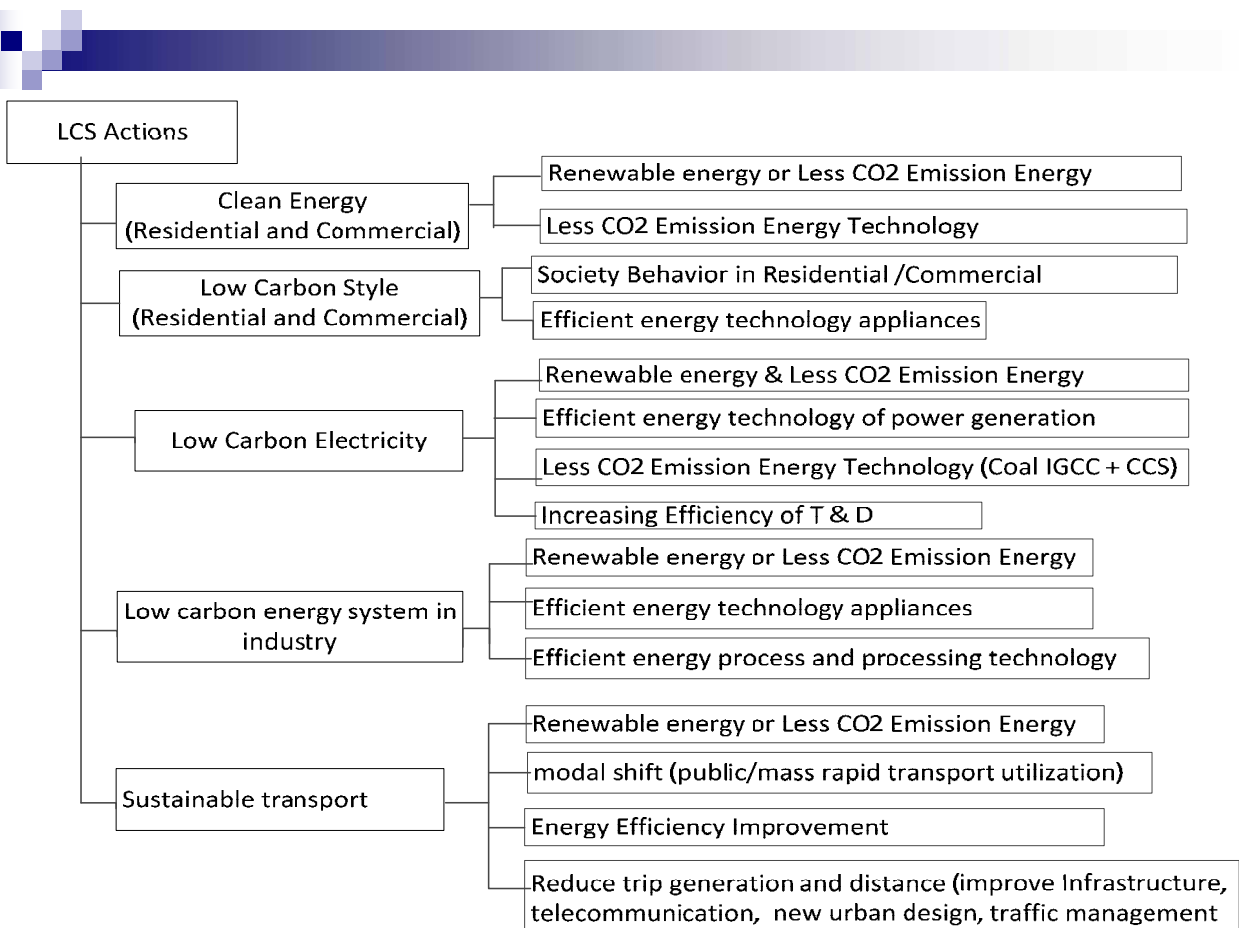
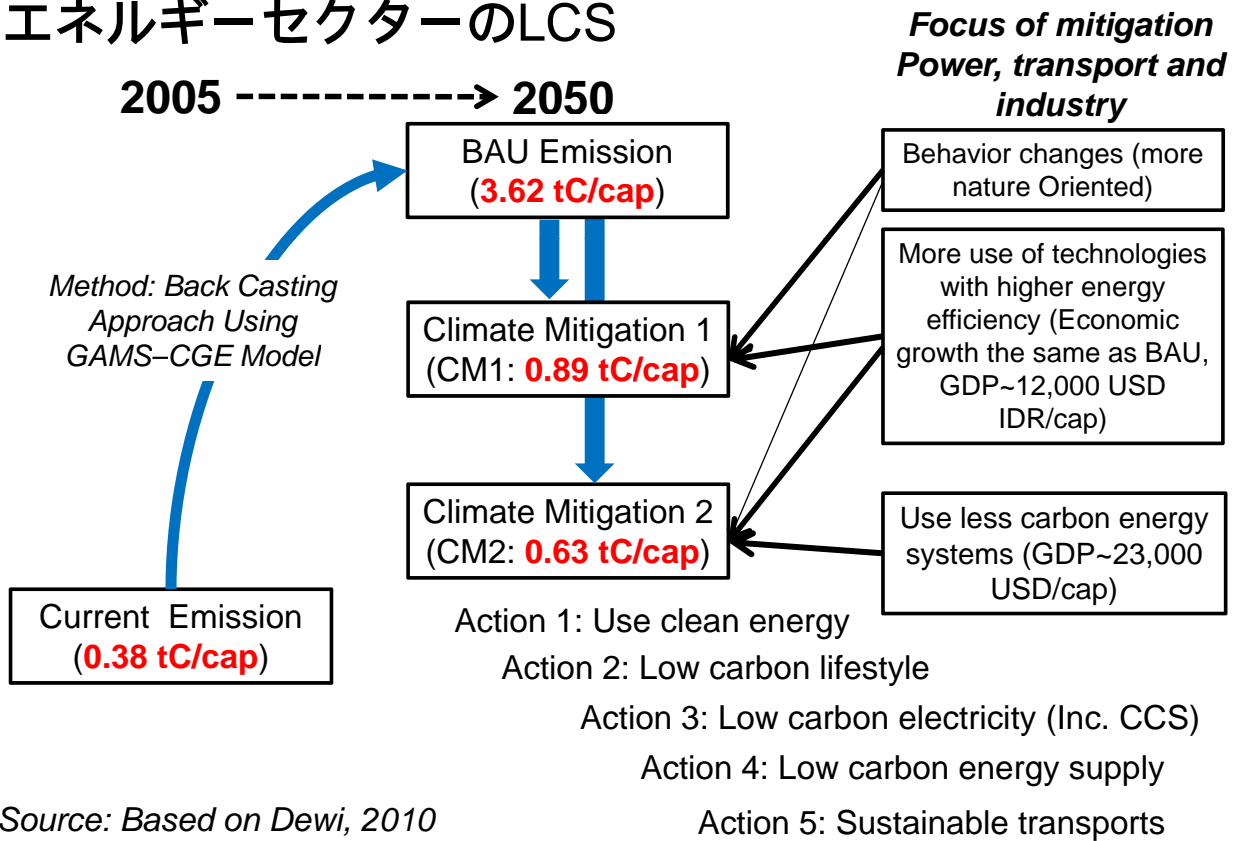



Proposed Financing and Incentive Policies for Supporting the Implementation of SFM and REDD+ 提案されているSFMおよびREDD+実施のための 資金・奨励政策

- Incentive and financing policies for conserving forest carbon and land swap (Nurrochmat, 2011).
 - Special allocation fund (Dana Alokasi Khusus, DAK) for 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

LCS for Energy Sector

エネルギーセクターのLCS





Policy measures to support the implementations of the actions:
行動の実施を支援する政策措置：

- a. Increasing share of new/renewable energy and less carbon emitting fuels (include less carbon emitting technology) in energy supply mix - PerPres No. 5/2006.
- b. On-going programs considered to meet energy supply mix target are power generation crash program I and II (which include clean coal and geothermal), kerosene to LPG, mandatory of bio-fuel utilization in transport, power, and industry (MEMR 32/2008);
- c. Increasing share of new/renewable (hydro, geothermal) and oil switch to natural gas as stated in the National Plan of Electricity Development (RUPTL) PLN 2008 - 2018;
- d. Regulations that lead to the formulation of national master plan on energy efficiency;
- e. Policies to support MRT development, diversification of fuels (CNG/ LPG, bio-fuel, electricity) in transportation, and emissions monitoring and control of local emission and combustion efficiency that has implication to the CO₂ emissions generation.



Concluding Remark

結論

- Government of Indonesia has already developed strategies and action plans toward low carbon development
- A number of financing and incentive policies are required to support the implementation of the strategies and action plans



TERIMA KASIH

ありがとうございました