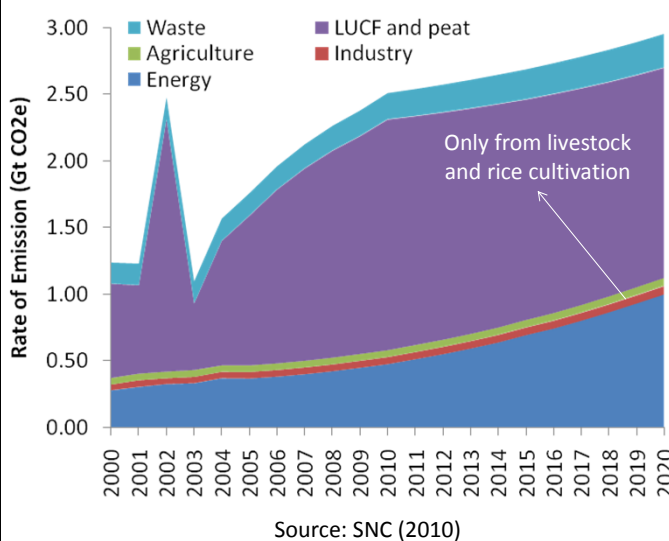# *Mitigation Policies and MRV system in Indonesia: Challenges and Opportunities*

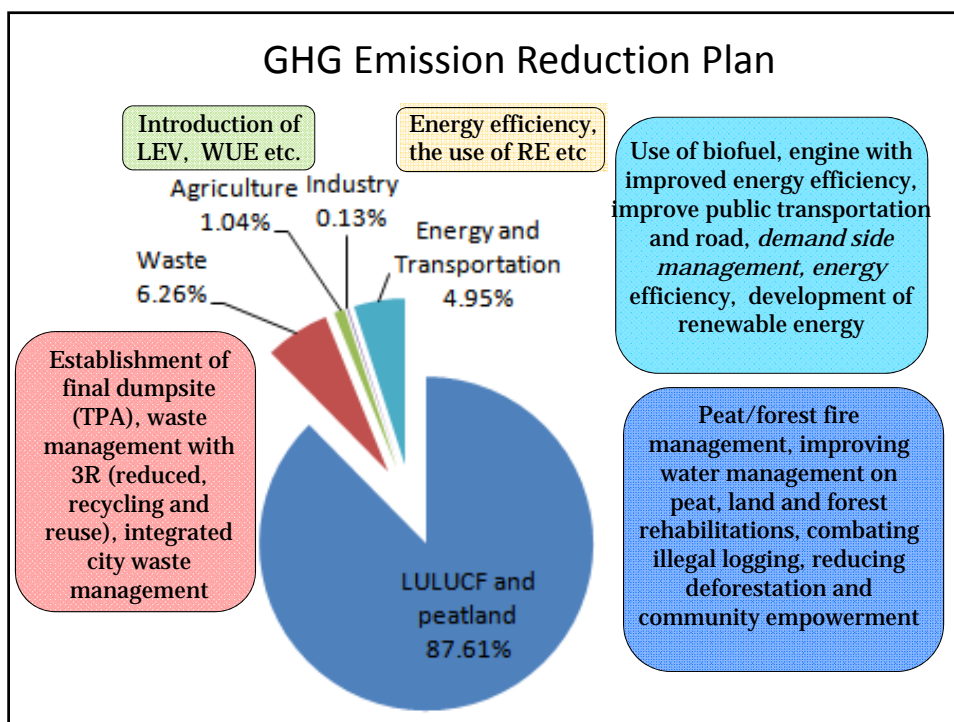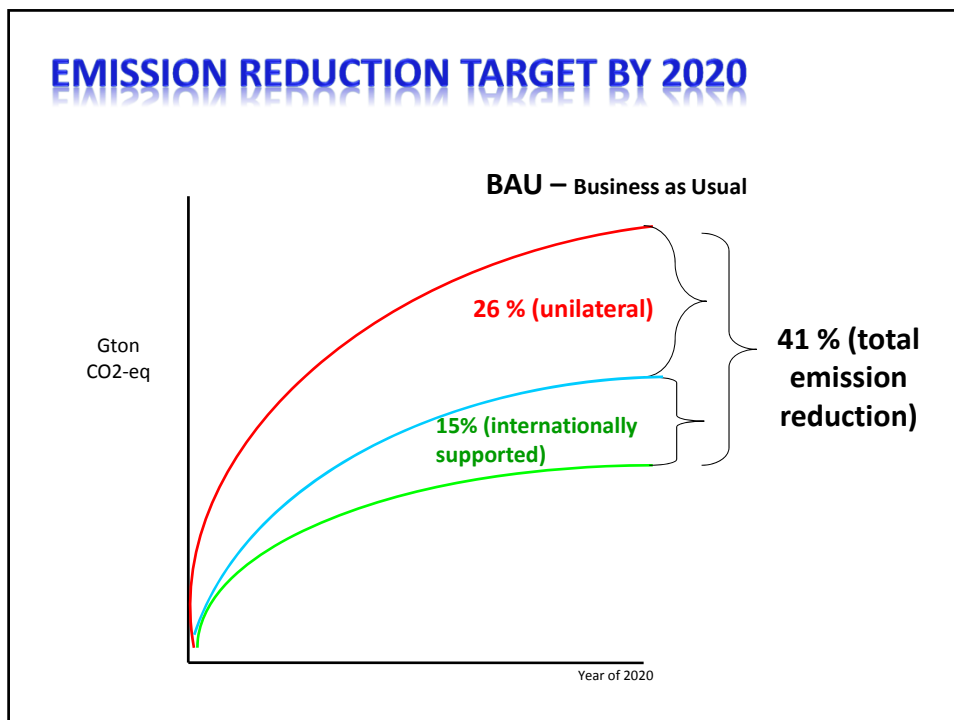**Rizaldi Boer**

Centre for Climate Risk and Opportunity Management in South East Asia and Pacific, Bogor Agriculture University

---

INTRODUCTION: HISTORICAL EMISSION & BAU PROJECTION

Source: SNC (2010)

- For the next 15 years, LUCF and peat land would remain as main source of GHG emission in Indonesia.
- Emission from energy sector would increase quite rapidly
- PR#61/2011 – NAP on Mitigation (26 and 41% ERT) and PR#71/2011 – National System on GHG Inventory
- More than 85% of ERT will be done through Land base Mitigation Activities

EMISSION REDUCTION TARGET BY 2020

BAU – **Business as Usual**

Gton
CO2-eq

26 % (unilateral)

**15% (internationally
supported)**

**41 % (total
emission
reduction)**

Year of 2020

GHG Emission Reduction Plan

**Introduction of
LEV, WUE etc.**

**Energy efficiency,
the use of RE etc**

**Use of biofuel, engine with
improved energy efficiency,
improve public transportation
and road, *demand side
management, energy*
efficiency, development of
renewable energy**

Agriculture Industry
1.04% 0.13%

Energy and
Transportation
4.95%

Waste
6.26%

**Establishment of
final dumpsite
(TPA), waste
management with
3R (reduced,
recycling and
reuse), integrated
city waste
management**

**Peat/forest fire
management, improving
water management on
peat, land and forest
rehabilitations, combating
illegal logging, reducing
deforestation and
community empowerment**

LULUCF and
peatland
87.61%

Indonesia – GHG Emission Reduction Plan

Sectors	Emission Reduction Plan (Giga ton CO2e)		Total	Action Plan
	26%	15% (Total 41%)		
Forestry & Peatland	0.672	0.367	1.039	• Land & forest fires control, • Water resources & system management, • Forest & land rehabilitation, Industrial Plantation Forest/HTI, Communal Forest/HR, • Illegal logging eradication, • Deforestation prevention, • Community empowerment.
Waste	0.048	0.030	0.078	• 3R strategy of waste management • Integrated waste management in urban areas
Agriculture	0.008	0.003	0.011	• Intro of low emission rice variety, • Efficiency of water irrigation, • Organic fertilizer utilization.
Industry	0.001	0.004	0.005	• Energy efficiency, • Renewable energy utilization, etc.
Energy & Transportation	0.038	0.018	0.056	• Bio-fuel use, • High gasoline fuel standard machinery, • Improvement of TDM, • Quality of public road & transportation, • Demand Side Management, • Energy efficiency, • Development of renewable energy
Total	0.767	0.422	1.189	

Types of mitigation activities

- Government-led mitigation actions to be subdivided in:
  - RAN/RAD GRK actions not being labelled as NAMAs
  - RAN/RAD GRK actions approved as domestic NAMAs and
  - RAN/RAD GRK actions approved as supported NAMAs
- Other (private sector or NGO initiated) mitigation actions that seek national recognition (e.g. climate village, green buildings).
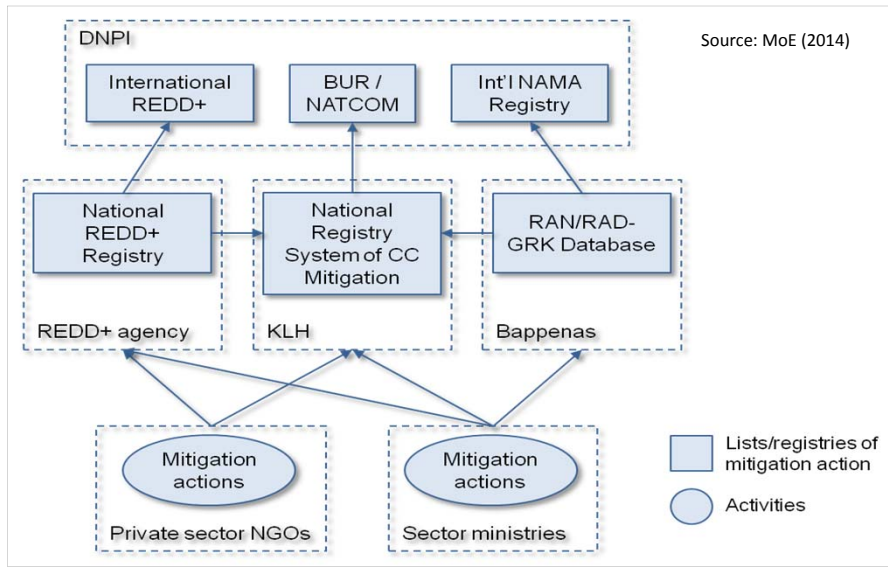- REDD+ mitigation actions

Proposing RAN/RAD GRK as NAMA
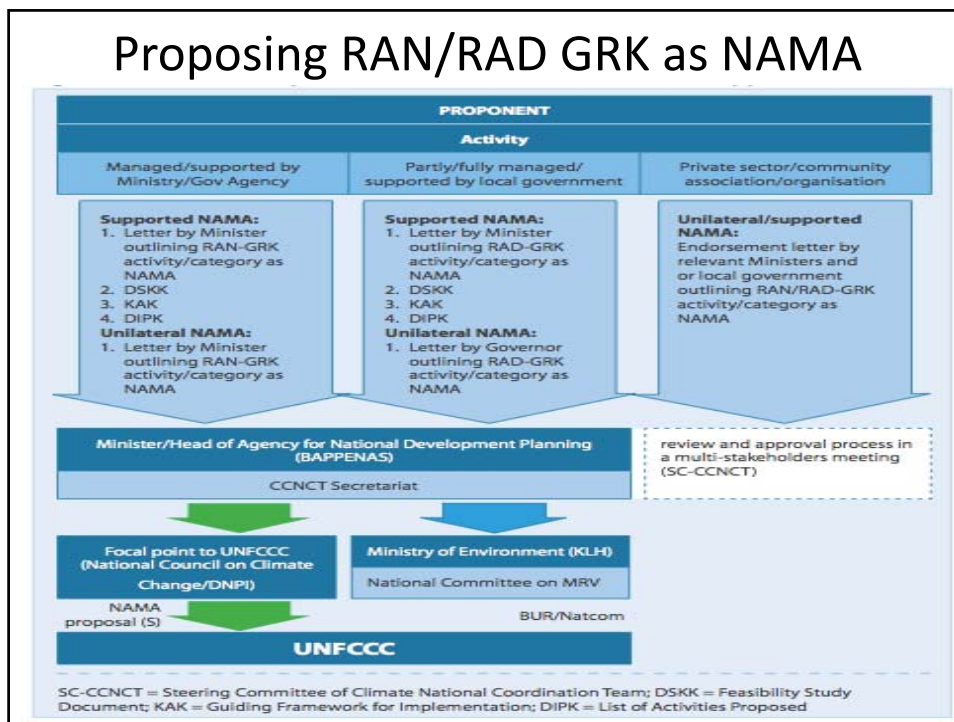
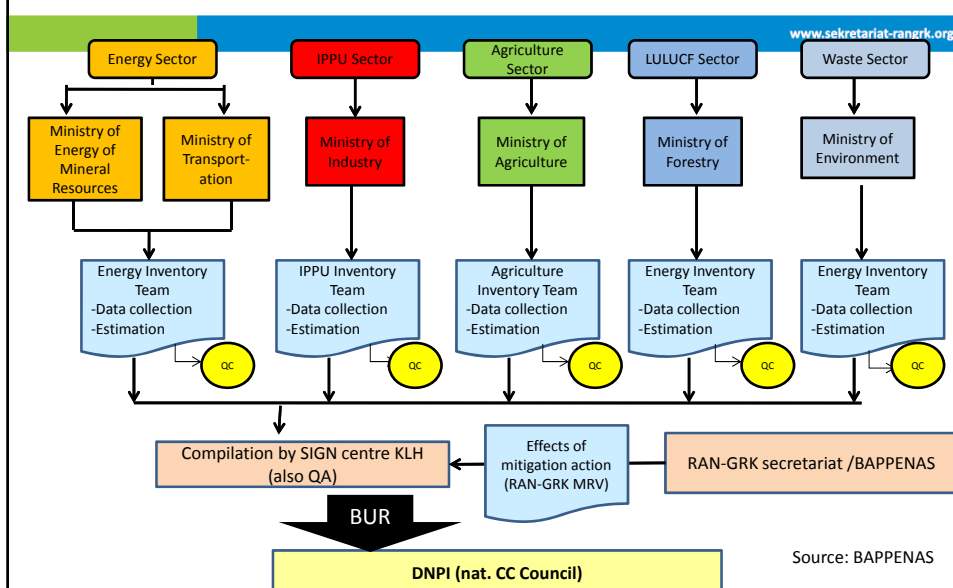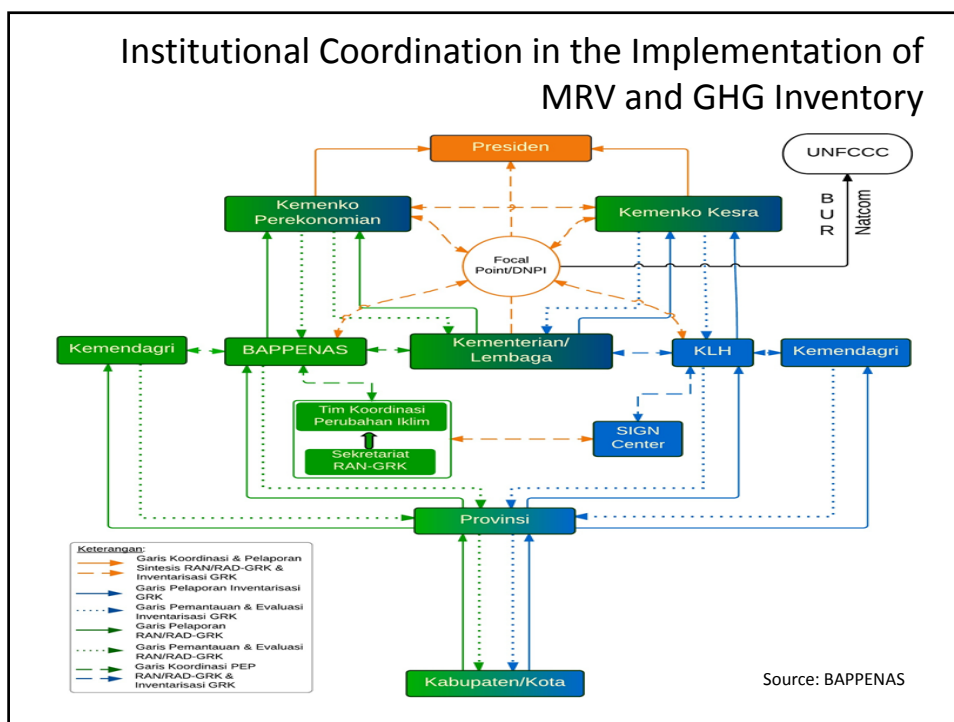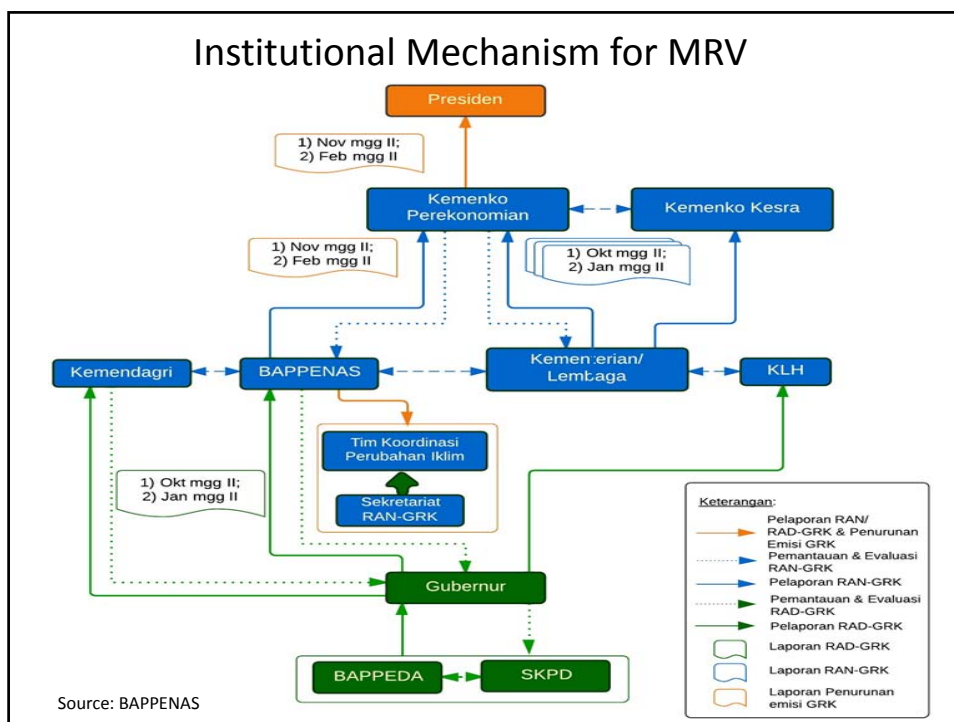| MRV PROCESS FOR MITIGATION ACTION	RAN/RAD-GRK activities (not labelled NAMAs)	RAN/RAD- GRK activities approved as domestic NAMAs	RAN/RAD- GRK activities approved as supported NAMAs	Other mitigation actions (non govern-mental)	REDD+ mitigation activities
Approval of mitigation activities	SC-CCNCT	SC-CCNCT	SC-CCNCT	KLH	National REDD+ Management Agency
Registration of activities	RAN/RAD-GRK database + National Registry System (NRS)	RAN/RAD-GRK database + NRS	RAN/RAD-GRK database + NRS	NRS	NRS + National REDD+ Registry
Monitoring and reporting guidelines	MER guidelines	MER guidelines	MER guidelines	MoE Regulation 15/2013	National MRV guidelines for REDD+
Verification guidelines	None	KLH guidelines for domestic verification	Int'l guidelines for NAMA verification	KLH guidelines for domestic verification	KLH + Int'l guidelines for REDD+ verification

Source: MoE (2014)

Role of the NRS as a central data repository to collect information on mitigation actions

MRV framework development

National GHG Inventory implementation by Sectors (Ministries)

Institutional Mechanism for MRV

Source: BAPPENAS

Institutional Coordination in the Implementation of MRV and GHG Inventory

Source: BAPPENAS

Getting National & International Recognition

Source: MoE (2014)
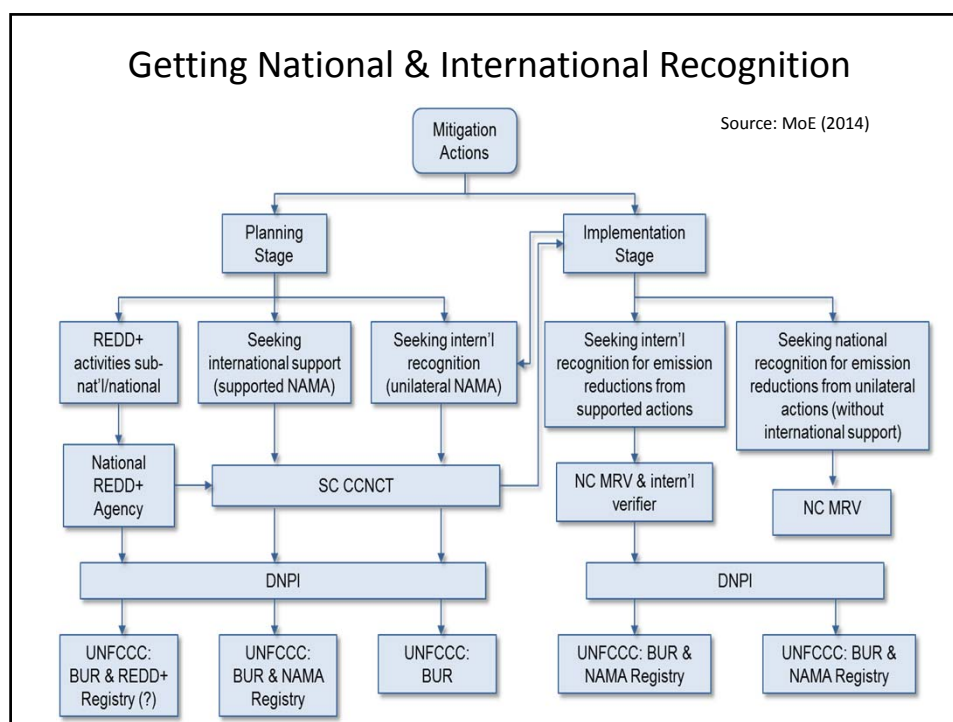
CHALLENGES & OPPORTUNITIES

- Developing reliable baseline (reference level and reference emission level)
- Capacity of Human resources at sectoral and local level
  - Relation between Mitigation and GHG Inventory
  - Data collection
  - QA/QC for key data sources
- Measuring impact of mitigation policies on emission reduction
- Remote sensing/GIS and information technology can help to increase data reliability
- Modeling tools can help to assess policy impact on emission and other development indicators