



NATIONAL CLIMATE CHANGE POLICY IN INDONESIA



Towards low carbon development

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OUTLINE



1. INTRODUCTION AND BASIC POLICIES
2. PROGRAMME AND ACTIVITIES
 - GHG INVENTORY
 - IPCC INDONESIA
 - CLIMATE VILLAGE PROGRAMME
3. LOW CARBON DEVELOPMENT PATHWAY

NATIONAL POLICY

1

- Law No. 6 Year 1994 on Ratification of UNFCCC
- Law No. 17 Year 2004 on Ratification of Kyoto Protocol

2

- Law No 32 year 2009 on Environmental Protection and Management

3

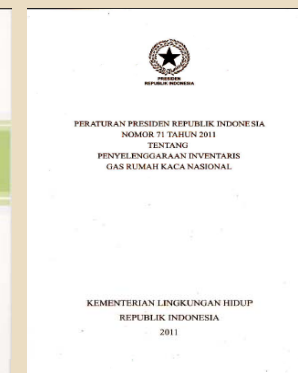
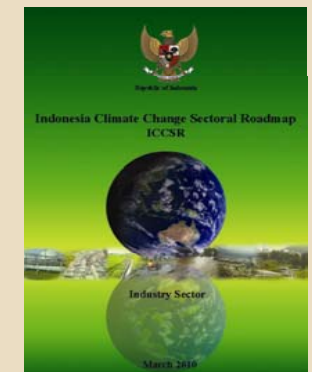
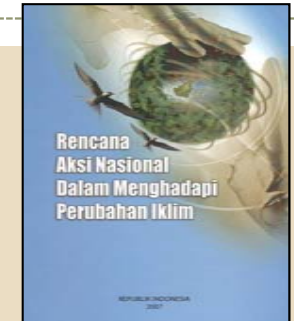
- National Action Plan on Climate Change year 2007, Draft National Action Plan on Adaptation of Climate Change 2012

4

- *INDONESIA CLIMATE CHANGE SECTORAL ROAD MAP (ICCSR), 2010*

5

- Presidential Decree No. 61/2011 on NAP of GHG
- Presidential Decree No. 71/2011 on Inventory of GHG
- Draft of GR on Impact management of Climate Change



National 5 year Mid-Term Development Plan / RPJMN 2010-2014

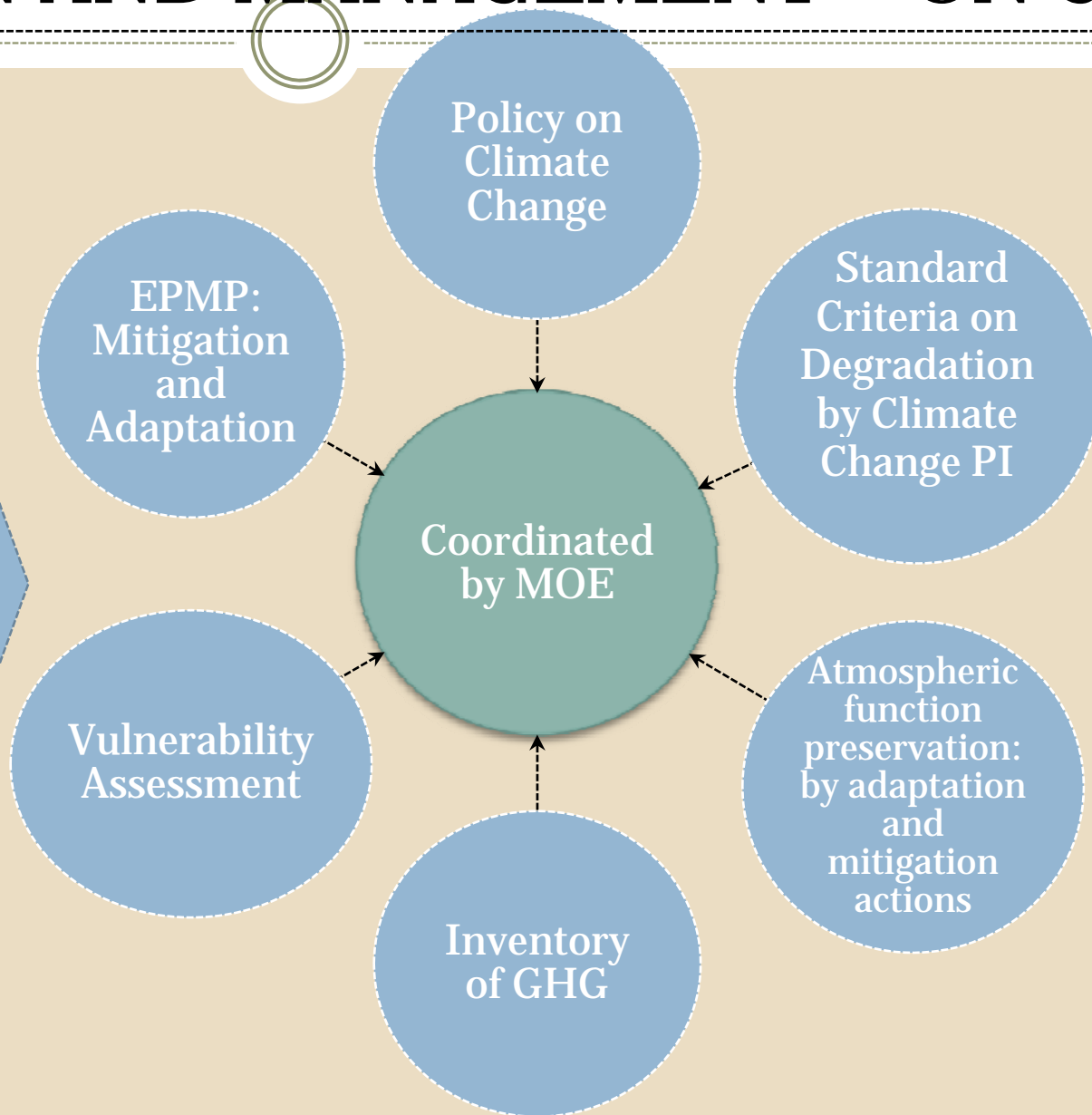
PRIORITY #9 – THE ENVIRONMENT & DISASTER MANAGEMENT:

- **“In order to anticipate climate change, Environmental SHOULD conservation will be utilized to support economy growth & sustainable welfare which is complemented by management and mastering of disaster risk”**

LAW NO. 32/2009 ON ENVIRONMENTAL PROTECTION AND MANAGEMENT – ON CC

“increased global warming → climate change → reduce of environmental quality

→ The needs for environmental protection and management



– 26% BY 2020

Indonesia's Pledge for Emission Reduction*

Statement by President Soesilo Bambang Yudhoyono



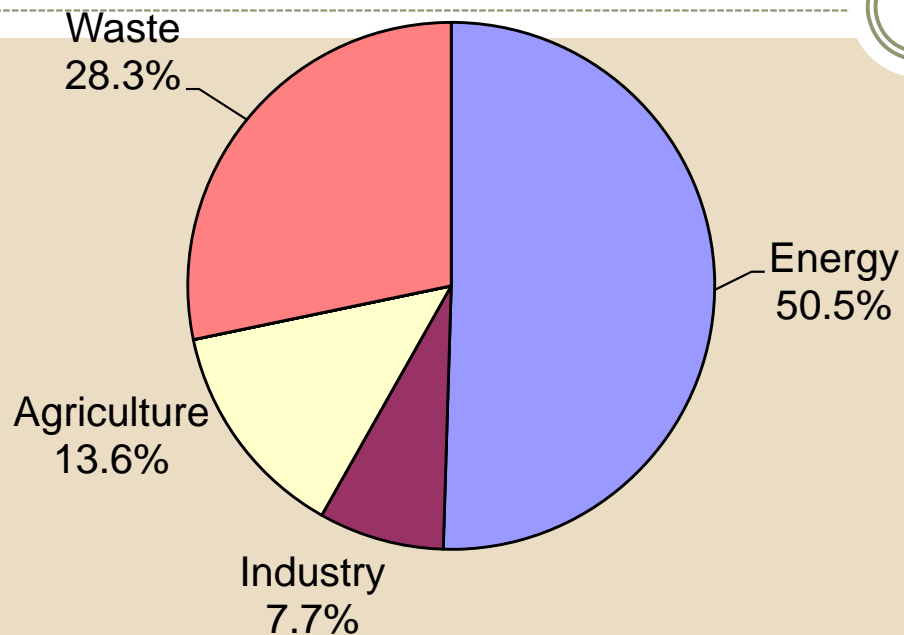
“We are devising an energy mix policy ... that will reduce our emissions by 26 percent by 2020. With international support, we are confident we can reduce emissions by as much as 41 percent.”

“We are also looking into the distinct possibility of committing a billion tons of CO2 reduction by 2050. We will change the status of our forests from that of a net emitter sector to a net [carbon] sink sector by 2030”

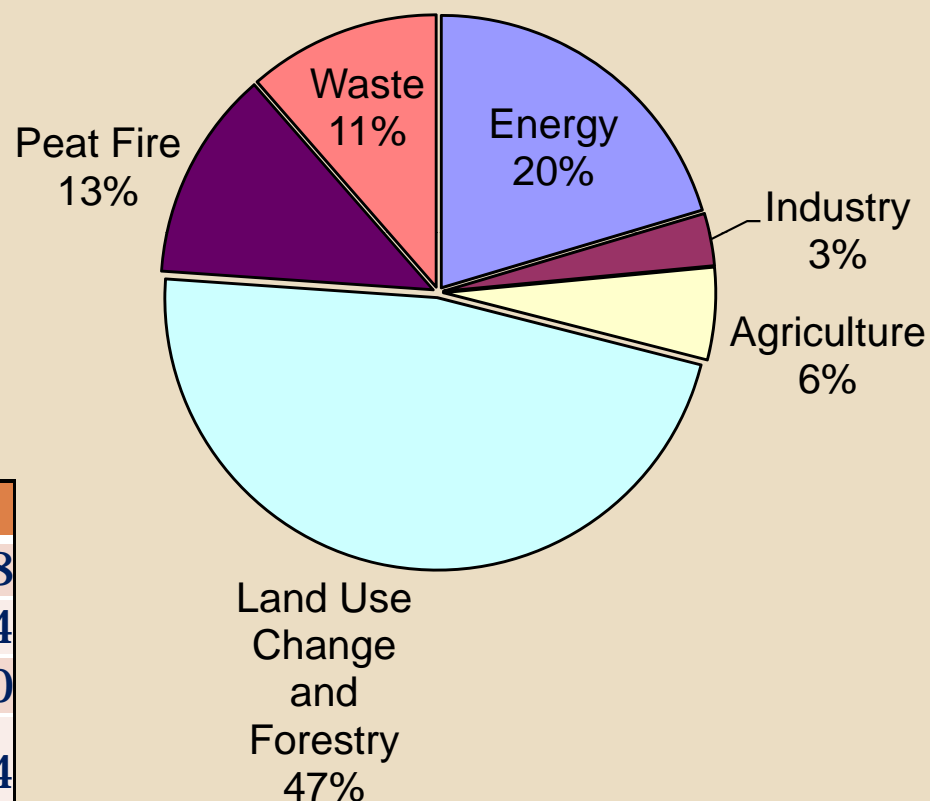
*Stated at the G20 Summit on Sept 2009 and reiterated at UNFCCC COP 15/CMP 5 on Dec 2009

EMISSION PROFILE

Without LUCF



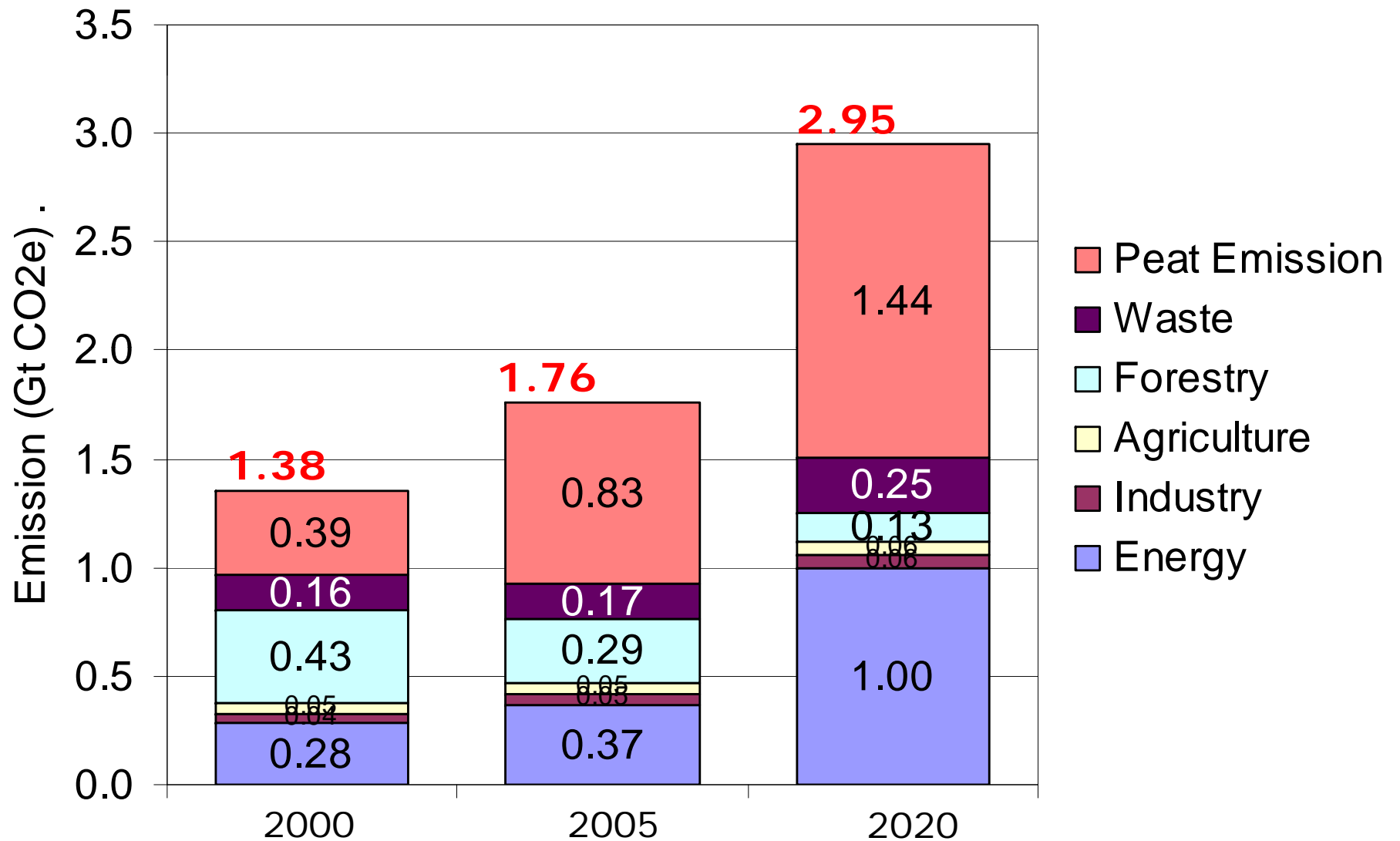
With LUCF



Sector	Gg CO ₂ e
Energy	280,938
Industry	42,814
Agriculture	75,420
Land Use Change and Forestry (excl. peat fire)	649,254
Peat Fire	172,000
Waste	157,328
Removal	556,449
NETT EMISSION	1,377,753

2000 INDONESIA'S GHG INVENTORY

Projection of Indonesia net emission: 1.38 GtCO₂e (2000) → 2.95 GtCO₂e (2020)



Key source categories are peat emission, forestry, energy and waste. Emission from peat fire was taken from van der Werf et al (2007). The figure in the charts did not include emission from liming and fertilizing

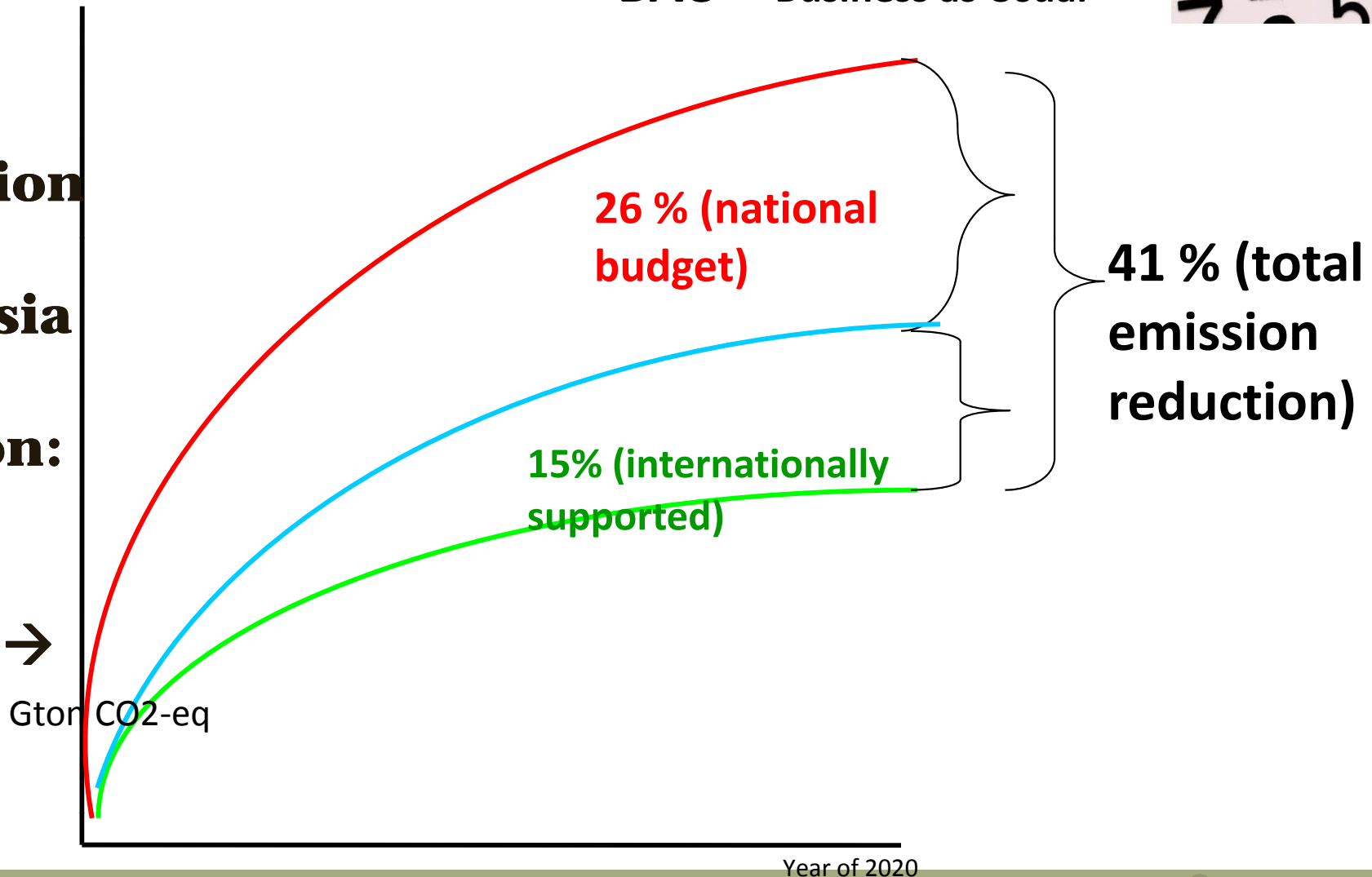
EMISSION REDUCTION TARGET

26% BY 2020



BAU – Business as Usual

**Projection
of
Indonesia
net
emission:
1.38
GtCO₂e
(2000) →
2.95
GtCO₂e
(2020)**



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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 3R strategy of waste management Integrated waste management in urban areas
Agriculture	0.008	0.003	0.011	<ul style="list-style-type: none"> Intro of low emission rice variety, Efficiency of water irrigation, Organic fertilizer utilization.
Industry	0.001	0.004	0.005	<ul style="list-style-type: none"> Energy efficiency, Renewable energy utilization, etc.
Energy & Transportation	0.038	0.018	0.056	<ul style="list-style-type: none"> Bio-fuel use High gasoline fuel standard machinery Improvement of Transport Demand Management (TDM) Quality of public road & transportation Demand Side Management Energy efficiency Development of renewable energy
Total	0.767	0.422	1.189	10

PRESIDENTIAL DECREES

- to address GHG emission reduction & GHG Inventory



26% Emission Reduction



**Presidential Decree No.
61/2011 on National
Action Plan for reducing
GHG Emission**

**Presidential Decree No.
71/2011 on
Conducting National
GHG Inventory**

NO 61 OF 2011
NATIONAL ACTION PLAN
ON GHG EMISSION
REDUCTION TARGET
(RAN-GRK)

- **RAN-GRK is a guidance to line ministries in planning, implementing, monitoring, and evaluating the national action plan of GHG emission reduction; a guidance to provincial governments in formulating regional action plan for reducing GHG emission, and a reference to community and private sector in planning and implementing GHG emission reduction**

NO 71 OF 2011
CONDUCTING NATIONAL
GHG INVENTORY SYSTEM

- **Objectives: i.e. to provide regular information on level, status, and trend of GHG emission and removals change, including carbon stock at national, provincial, and municipal/regency level; and to provide information on GHG emission reduction achievement of national climate change mitigation actions.**
- **Regulation on: a. Accounting Process and Procedure of GHG Inventories; b. Task & Authorities of Governments at Central as well as Provincial and Municipal/regency Levels; c. Verification; d. Reporting, e. Assistance to Local Governments**

IMPLEMENTATION OF PRESIDENTIAL DECREES

NO 61 OF 2011 NATIONAL ACTION PLAN ON GHG EMISSION REDUCTION TARGET

- **LOCAL ACTION PLAN ON GHG EMISSION REDUCTION TARGET (RAD – GRK):**
- **a. Provinces formulated RAD-GRK which facilitated by BAPPENAS, Ministry of the Environment, and Ministry of Home Affairs in 2012**
- **Provinces are implementing RAD-GRK in 2013**

NO 71 OF 2011 CONDUCTING NATIONAL GHG INVENTORY SYSTEM

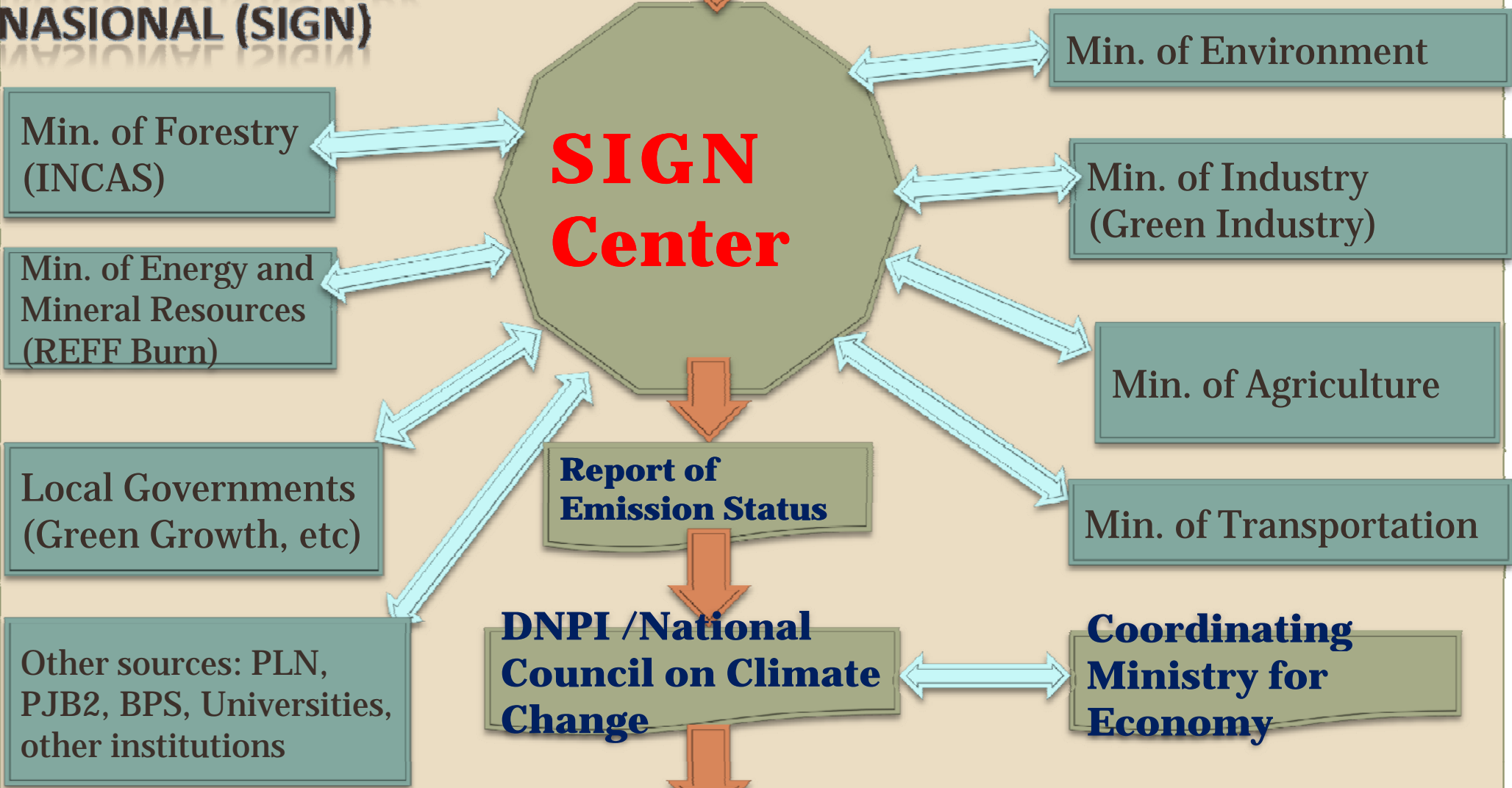
- **Formulated GUIDELINE ON NATIONAL GHG INVENTORY**
- **Developing criteria for private sector which will have obligation for reporting GHG emission**
- **Developing Verification system**

II. PROGRAM AND ACTIVITIES

- **Importance of GHG Inventory**
- **Efforts of IPCC-Indonesia**
- **Proliferation of Climate Village Program (PROKLIM)**
- **Development of MRV System**

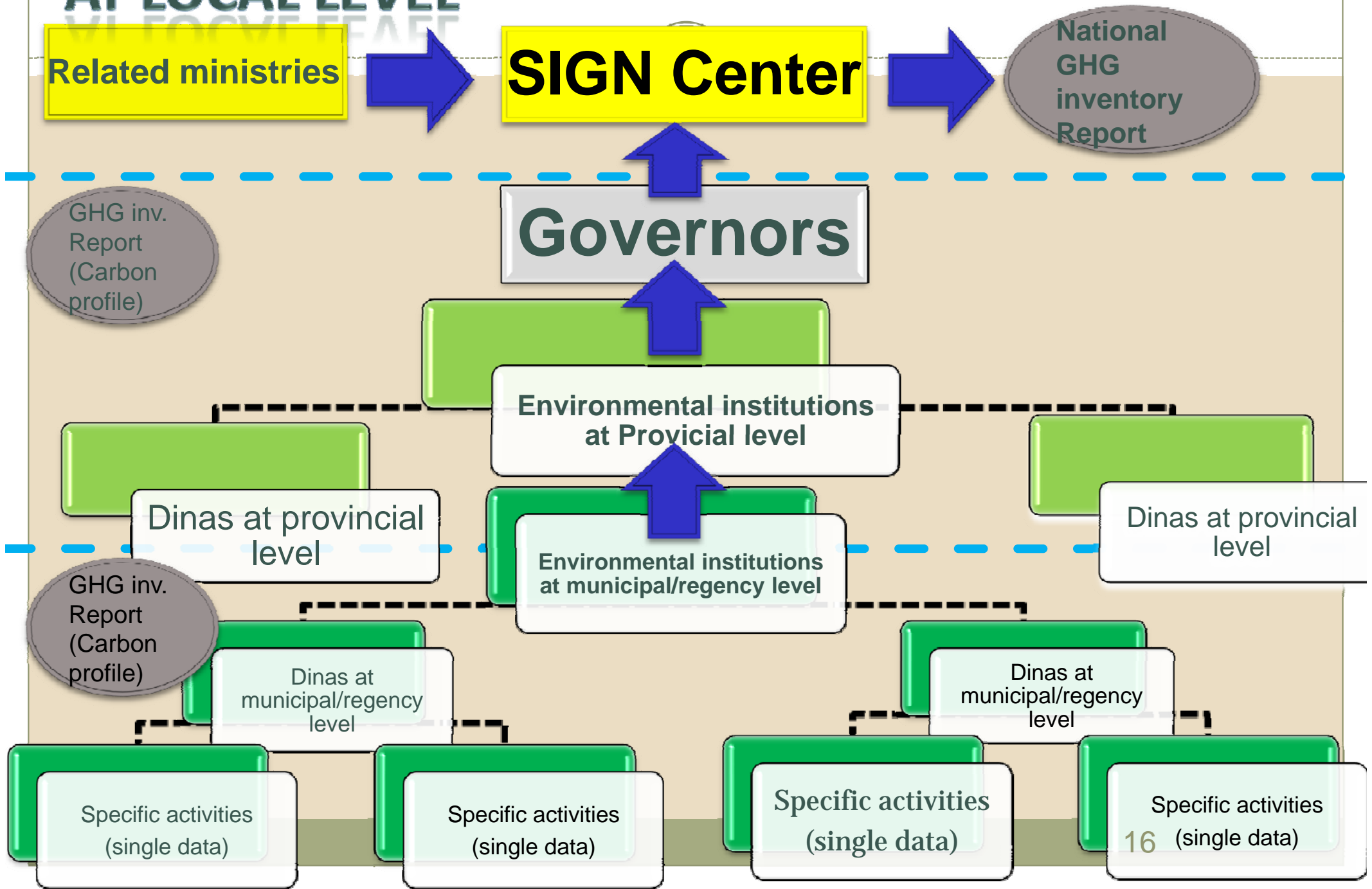
**NATIONAL GHG INVENTORY
SYSTEM/SISTEM
INVENTARISASI GRK
NASIONAL (SIGN)**

**Steering Committee
(High-Level Officials of line ministries)**



UNFCCC

IMPLEMENTATION SCHEME OF GHG INVENTORY AT LOCAL LEVEL



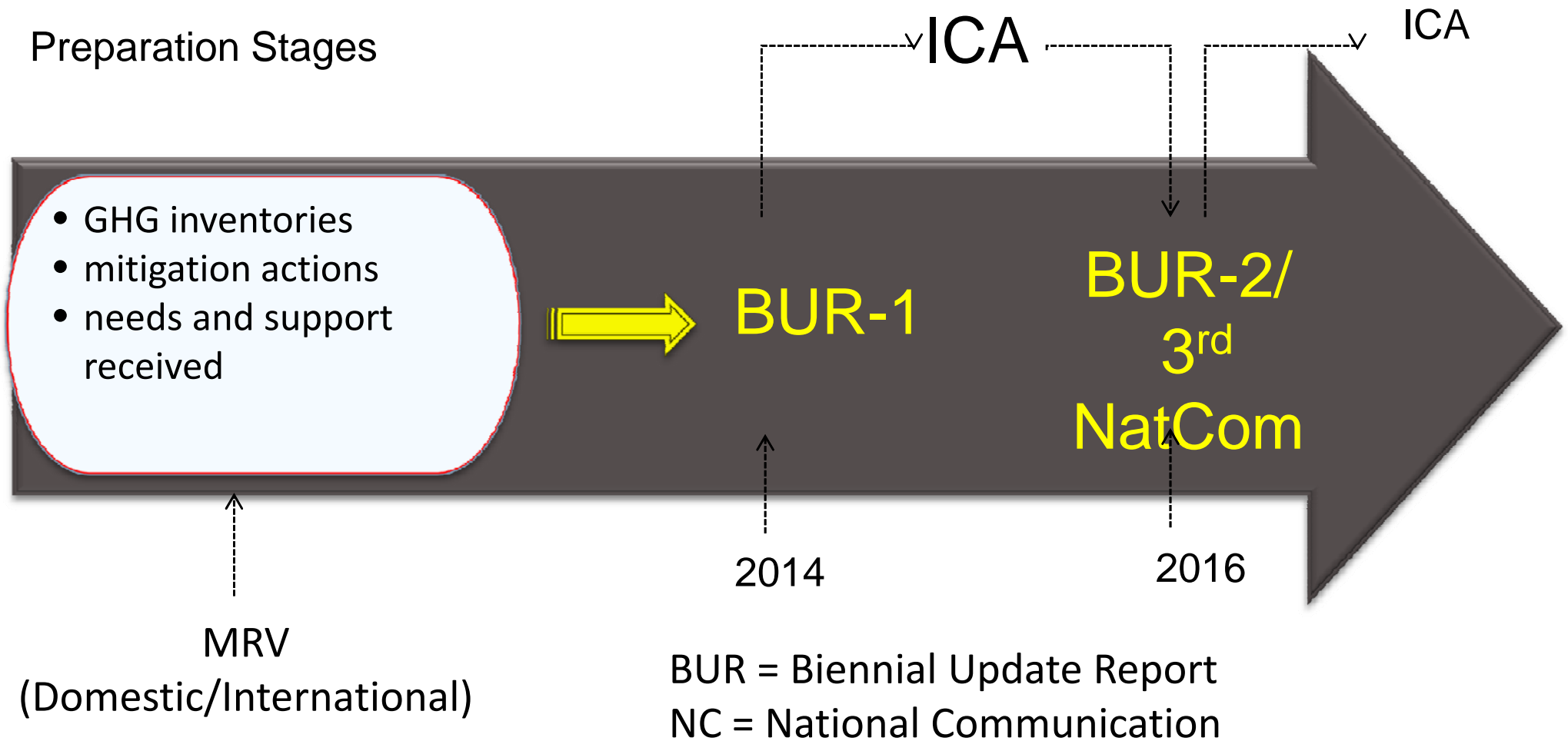
JICA SUPPORT (2011-2014): CAPACITY DEVELOPMENT FOR DEVELOPING OF GHG INVENTORIES

- Institutional arrangement at national level
- Conducting Pilot project located at North and South Sumatra Provinces:
 - produced 3 (three) Manuals (Manual 1: accuracy enhancement on activity data collection; Manual 2: determination of solid waste characteristics, Manual 3: report collection system)
 - Improving data accuracy through surveys on waste composition and dry matter contents

Third National Communication (TNC) & Biennial Update Report (BUR)

ICA = International Consultations & Analysis

Preparation Stages



Progress on GHG Inventory

- Capacity Building of GHG Inventory for Provincial Governments through Deconcentration Fund 2012-2013
- The Second National Summit on Climate Change 2012 : GHG Inventory and Emission Reduction
- Formulating of 2010-2012 National GHG Inventory Report
- Preparing Third National Communication

NATIONAL COMMUNICATIONS (NATCOM)



**INITIAL
NATCOM
(1994)**

**SECOND
NATCOM
(2010)**

**Initial stage of
THIRD
NATCOM (2013)**

+ STATE OF THE PROBLEM AND NEEDS .

Geoclimatology of Indonesia

→ Vulnerable to the impact of climate change

Policy, programme and actions

Studies on Impact of Climate Change

Scientific Climate Change Forum

IPCC
Indonesia

1. Collect and study data and information on:
 - a. Climate change in Indonesia
 - b. Impact of climate change in Indonesia
 - c. Initiatives of individual, institutions, local community and private sector
2. Analyse, review and interpret of reports published by *IPCC* in the context of Indonesia
3. Formulate recommendation based on collected and reviewed data and information
4. Enhance capacity and participation of researchers in Indonesia
5. Develop network with similar science forum and encourage international cooperation

ORGANISATIONAL STRUCTURE OF IPCC INDONESIA

Bertugas untuk memberikan arahan Kepada Kelompok Kerja mengenai Kebutuhan kajian ilmiah untuk isu perubahan iklim spesifik, serta Menetapkan hasil kajian ilmiah Sebagai output dari FIPII

Pleno

Steering
Committee

Secretariat

Kelompok kerja merupakan Wadah yang terbagi dalam beberapa isu spesifik

Kelompok kerja dapat berkembang sesuai dengan Perkembangan isu

WG
ENERGY

WG
FOOD
SECURITY

WG
FORESTRY

WG
MARINE
AND
FISHERIES

Merupakan perwakilan K/L terkait, Peneliti, Dan Perwakilan Perguruan Tinggi yang Telah diseleksi sesuai dengan Kepakarannya.

Pakar dan praktisi yang berkontribusi dalam penyusunan laporan

Program Kampung Iklim (ProKlim) ~a climate village programme~

- “Kampung” in Indonesian or “Village” in plain English → is administered according to traditions and customary law (adat), located in rural areas and urban subdivisions, practices the culture of helping one another as a community, as well as being family-oriented (especially the concept of respecting one's family [particularly the parents and elders]), courtesy and believing in God as paramount to everything else.
- Various name of “kampung” in Indonesia: *banjar* (Bali), *nagari* (West Sumatera), *dusun* (Java), etc

ProKlim

- is a program to recognize active participation of local communities in implementing actions of integrated climate change mitigation and adaptation, which contributes to the achievement of national green house gas reduction target and increases the community resilience to the climate change impact.
- Legal basis : Minister Environmental Regulation No. 19/2012

ProKlim as a part of global actions and UNFCCC

Adaptation
Component



National
Adaptation
Plans
(NAPs)

- ProKlim and its implementation as input for the development of NAPs related to developing countries' action and its role for policy development.

Nairobi Work
Programme
(NWP)

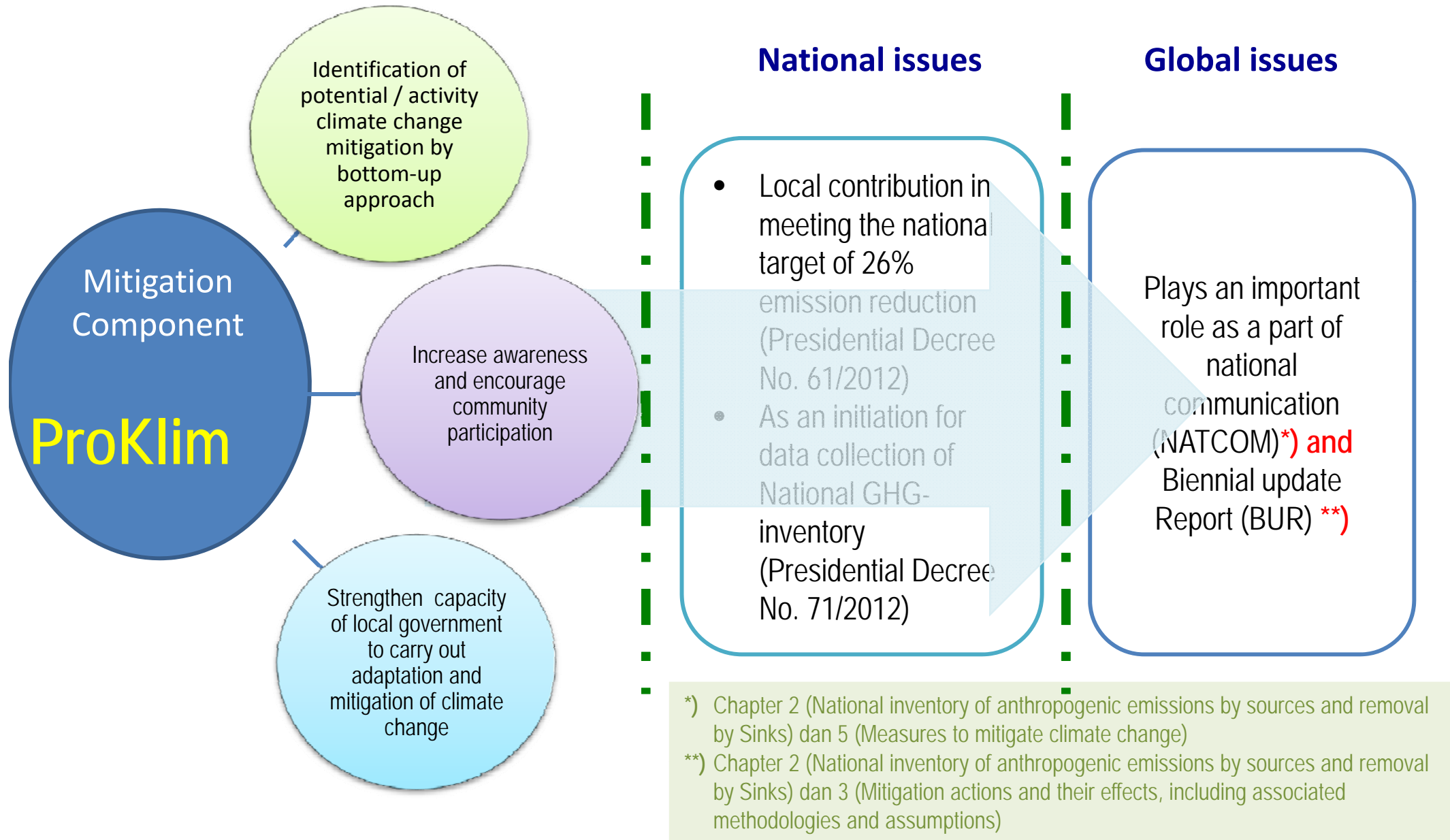
- ProKlim as an input for strengthening adaptation actions, in particular "**Adaptation planning and practice**" at local-level.
- Its implementation could be submitted as a part of NWP, related to *concrete actions on adaptation* which will be potentially supported by developed countries.

*Cancun
Adaptation
Framework
(CAF)*

Loss and
Damage
(LnD)

- The implementation of ProKlim draws vulnerability in the area and will play an important role for baseline-setting in terms of insurance mechanism for the losses and damages caused by the climate change.

ProKlim as a part of global actions and UNFCCC



Components

Adaptation activities, i.a.:

- Management of drought, floods and landslide
- Enhancement of food security
- Anticipation to sea level rise, and other risks/hazards in coastal area
- Management of climate-related diseases

Mitigation activities, i.a.:

- Management of waste and solid waste
- Liquid waste treatment and utilization
- Energy consumption (e.g. energy efficiency, renewable energy)
- Reducing emission from agriculture activities
- Forest conservation
- Management of land and forest fire

Local Community and Sustainability Aspects, i.a.:

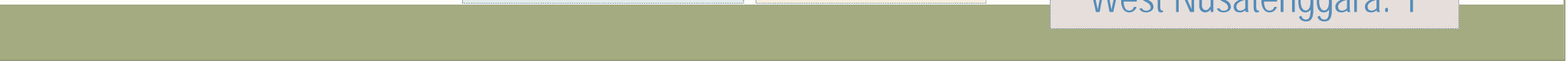
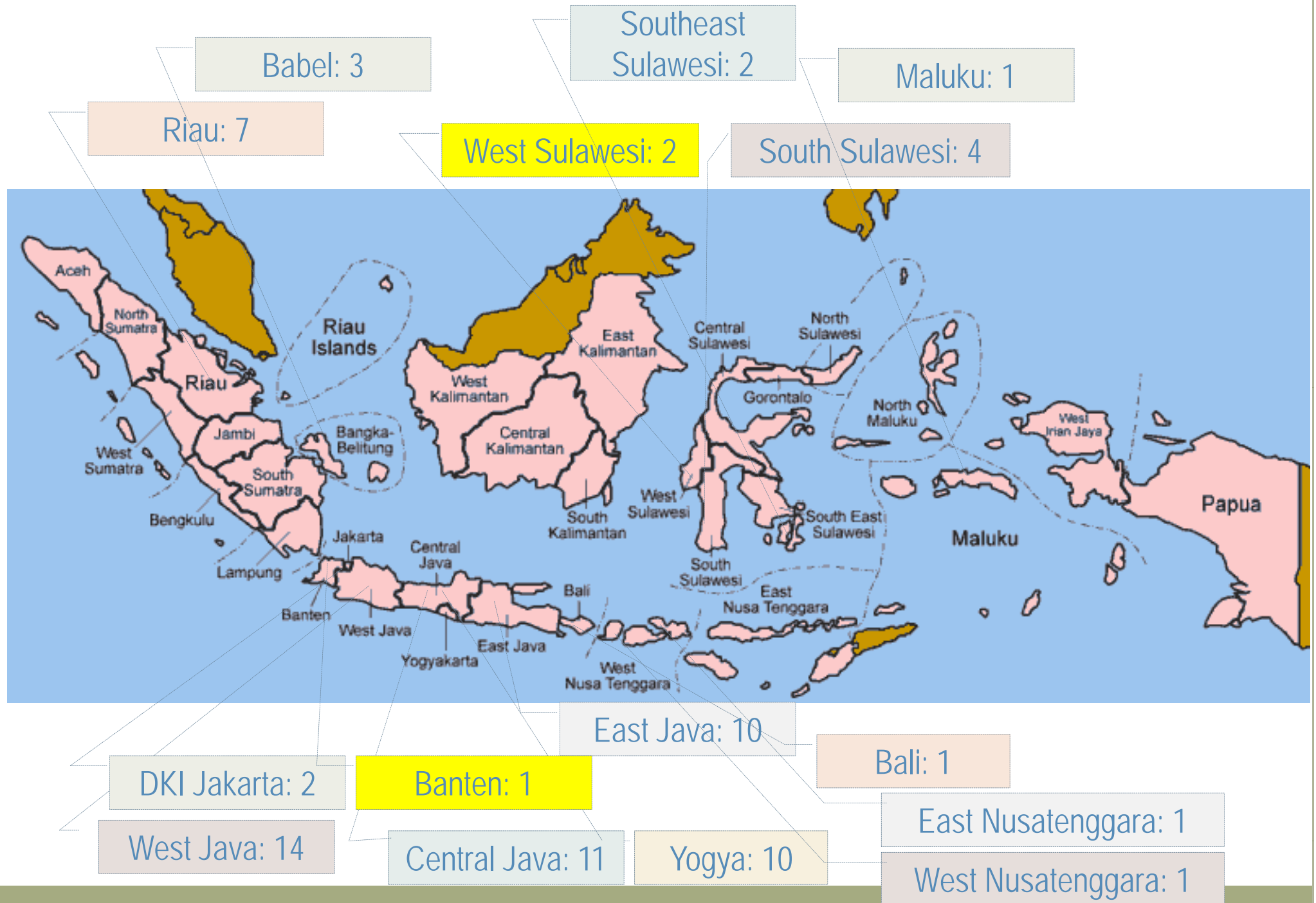
- Availability of local organization to manage and implement the activities
- Adoption of local policies, traditional ethics and other local knowledge to support the implementation of activities
- Community dynamics (e.g.: community self sustain, self finance scheme, gender participation)
- Local community capacities to implement the activities
- External support from governments
- External support from private sectors, NGOs, universities and other
- Continual improvement of existing activities
- Positive impacts (economic benefits, environmental benefits, and/or minimize the impact of climate extreme events)

Benefits of PROKLIM

Contribution of the local community for the achievement of 26% national emission reduction target in 2020 compare to business as usual;

Enhancement of adaptive capacities to the impact of climate change and climate variability in local level;

Provide data and information on potential climate change mitigation and adaptation activities in local level.



ProKlim 2012

71 locations from 15 provinces submitted to the Ministry of Environment as a ProKlim candidate by local government (districts, municipalities), universities, NGOs, individual, private sectors.

Evaluated by technical team and steering committee.

Result of evaluation: 7 locations have been received ProKlim's Trophy and 4 locations awarded a certificate as "Potensial Location for ProKlim Development"

No	Location	Disctricts/Municipalities	Province
1	Sukunan Village	Sleman	Yogyakarta
2	Jetis Lor Village	Pacitan	East Java
3	Sambangan Village	Buleleng	Bali
4	Gatak II, Tamantirto Village	Bantul	Yogyakarta
5	Serut Village	Bantul	Yogyakarta
6	Mukti Jaya Village	Rokan Hilir	Riau
7	Nglegi Village	Gunungkidul	Yogyakarta

No	Location	Disctricts/Municipalities	Province
1	Kerta Village	Gianyar	Bali
2	Kembang Village	Pacitan	East Java
3	Jomblang Village	Semarang	Central Java
4	Mekarjaya Village	Cianjur	West Java



Sukunan Village, Sleman District, Yogyakarta Province

Adaptation and mitigation activities

- Water reservoir (embung) and water
- Absorption wells and biopores.
- Revegetation.
- Protection and management of water resources
- Water use efficiency by designing traditional shower
- Crop cultivation and fertilizer system (land management, composting).
- Zero burning technique.
- Management of indigenous species.
- Yard optimization: traditional medicines.
- Vector management and public sanitation.
- Integrated waste management, including waste separation, utilization, 3R.
- Communal wastewater treatment.
- Water management for agricultural activities.
- Operationalization of biogas, treatment of livestock waste.
- Traditional innovation: such as design of ovitrap (for intercepting its life cycle), natural refrigerator, water heater.

Potential climate risks

- Drought caused by elongated dry season.
- Potential risk of water scarcity in the area.
- Changing of rain season threatens agricultural productivity.
- Un-managed waste emits greenhouse gasses.

Emission reduction potential, from:

- Livestock activities: cattle 0.00004 Gg CH₄/year (0.84 ton CO₂/year), sheep 0.00000528 Gg CH₄/year (0.11088 ton CO₂/year), poultry 0.0000348 Gg CH₄/year (0.7308 ton CO₂/year).
- Chemical fertilizer reduction by 25%: 0,601375 ton CO₂/year.

Benefits

- Water security.
- Waste reduction.
- Food security.
- Alternative income.
- Enhancement of carbon stock.
- Appropriate public sanitation.

Local Actions of Sukunan Village



Vector management



Absorption wells



Water harvesting



Mix-farming

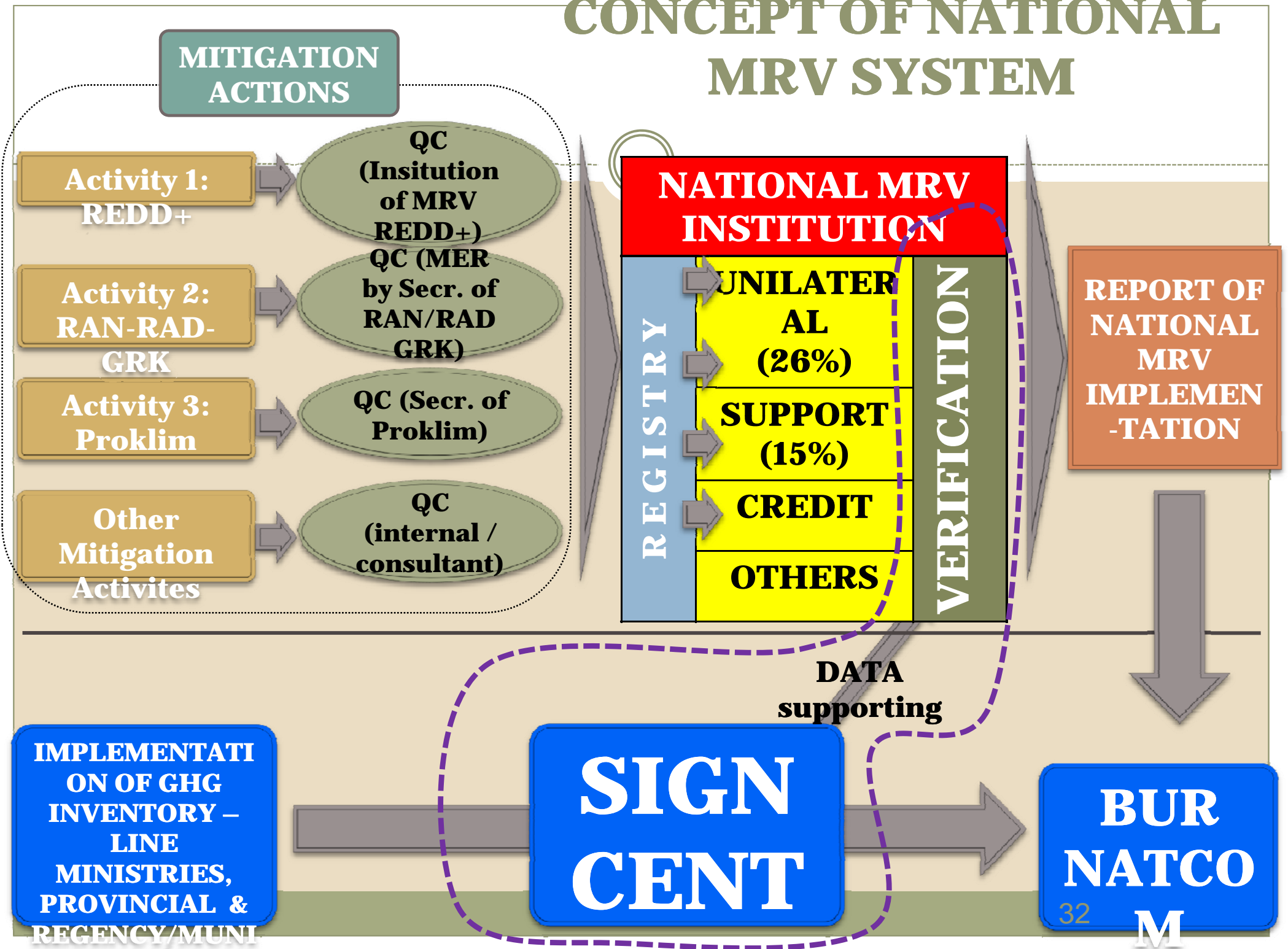


Revegetation



Biogas

CONCEPT OF NATIONAL MRV SYSTEM



LOW CARBON GROWTH PATHWAY



- Synergy and partnership among government, private sectors, and community
- Identification of various low carbon options in all sectors
- Enhancing international cooperation on implementation low-carbon program & activities

