Development of Carbon Market Policies and Instruments

Dicky Edwin Hindarto

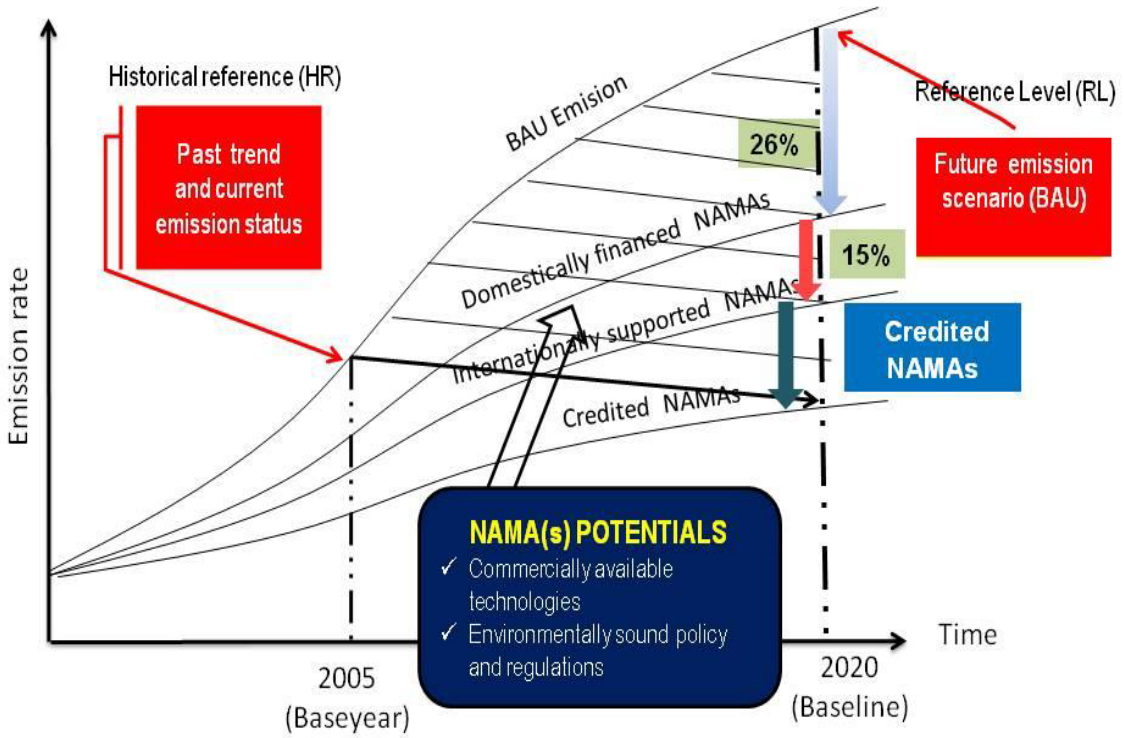
dewan nasional perubahan iklim

Presentation structure

1. Indonesia carbon market related policies
2. Global carbon market situation
3. Indonesia carbon market situation
4. Market instruments development

The big picture

The President announced the country commitment in 2009 that it is devising an energy mix policy including LULUCF that will reduce its emissions by 26% from BAU in 2020, and with international support it can further go by as much 15%



Source: BAPPENAS

- The reduction will be achieved by:

1. Sustainable peat land management
2. Reduction of deforestation and land degradation
3. Carbon sequestration development
4. Promoting energy saving
5. Alternative and renewable energy resource development
6. Solid and liquid waste reduction
7. Shift to low-emission transport modes

- Reduction beyond the unilateral and supported NAMAs is possible to be credited.

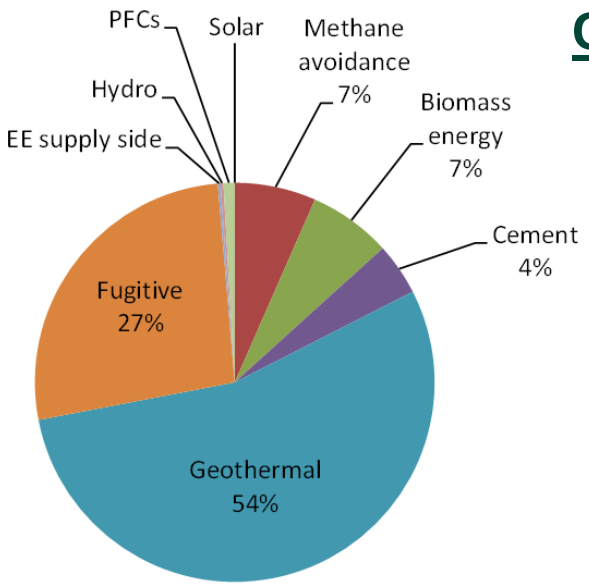
The related policies

Various policies are existed to reduce GHG emissions and encourage low carbon development.

Policy Name		Targeted Outcome	Applicability
Presidential Regulation 61/2011	National Action Plan on GHG Emissions Reduction (the RAN-GRK)	26%-41% emissions reduction below 2020 BAU	Various sectors
Presidential Regulation 71/2011	National GHG Inventory	Periodic updated information of emissions and emissions reduction	All sectors
Presidential Regulation 5/2006	National Energy Policy	Optimal energy mix (17% new and renewable energy) and <1 energy elasticity in 2025	Energy sector
Government Regulation 70/2009	Energy Conservation	Energy management and conservation	Energy users >6000 TOE/y
MoI Regulation 12/2012	Roadmap of CO2 Emission Reduction in Cement Industry	2% voluntary and 3% mandatory reduction in 2011-2015 and 2016-2020 below 2009 emission intensity	All cement producers
MEMR Regulation 4/2012	Electricity Purchasing Price of Small-medium Renewable Power Plant and Excess Power	Energy security and encourage renewable energy development	Power sector
MEMR Regulation 14/2012	Energy Management	Clear guideline on energy conservation options and management	Energy users >6000 TOE/y

Indonesia carbon market status

Market instruments, e.g. CDM, are proven effective to encourage low carbon activities.



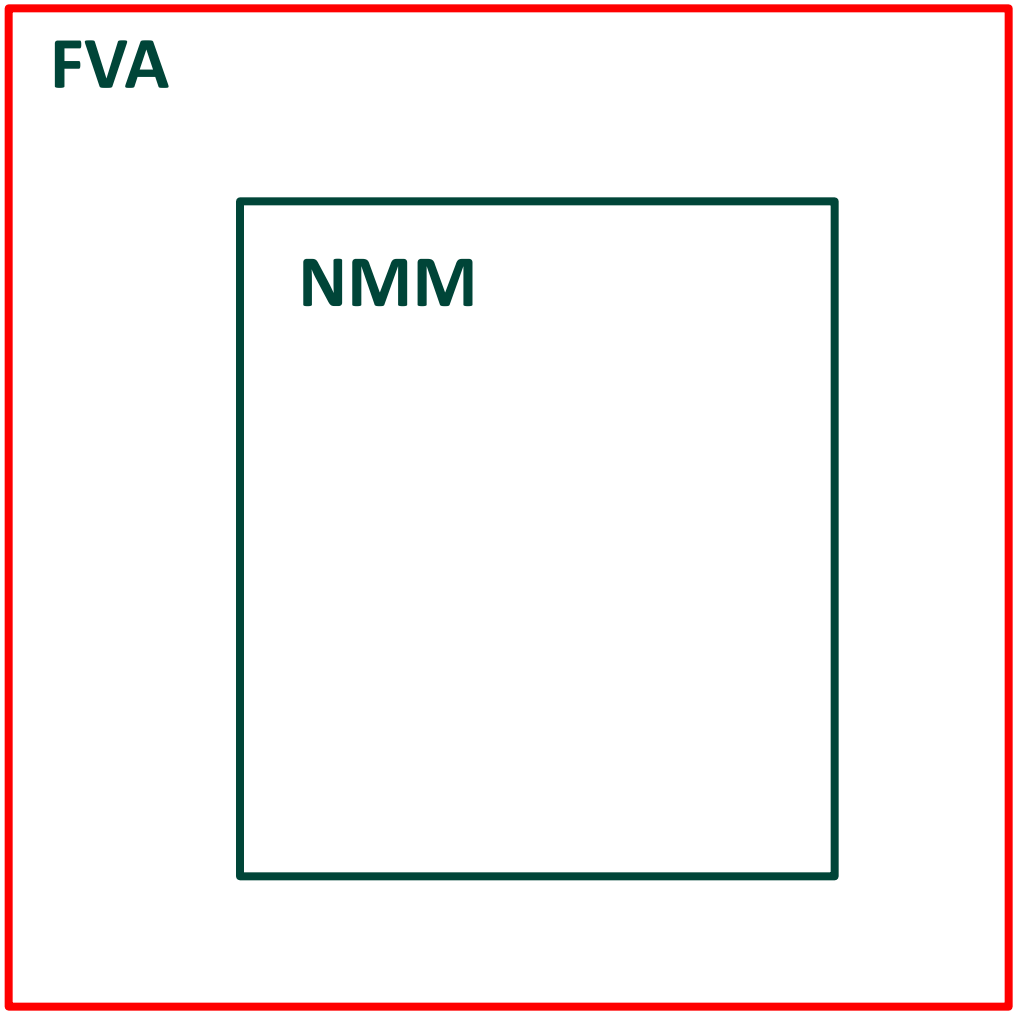
Clean Development Mechanism

- Total 212 CDM projects have been approved by Indonesia DNA,
- 128 projects are registered on UNFCCC, mostly of methane avoidance projects, and
- 31 CDM projects have been issued their CERs (total 9.15 million ton CO2, mostly of geothermal).

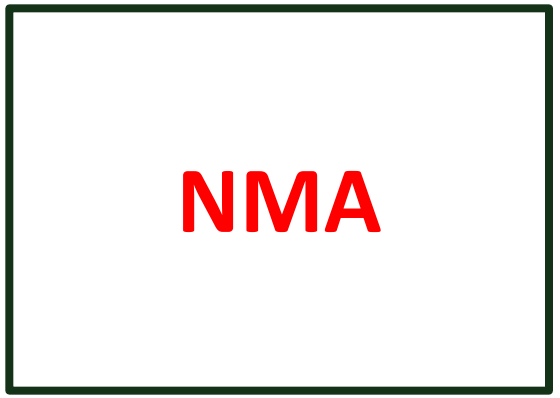
International Voluntary Carbon Market

- 11 VCS projects have been developed, including 1 REDD+ project in Central Kalimantan,
- Six of them have already produced 2,2 million ton VER.

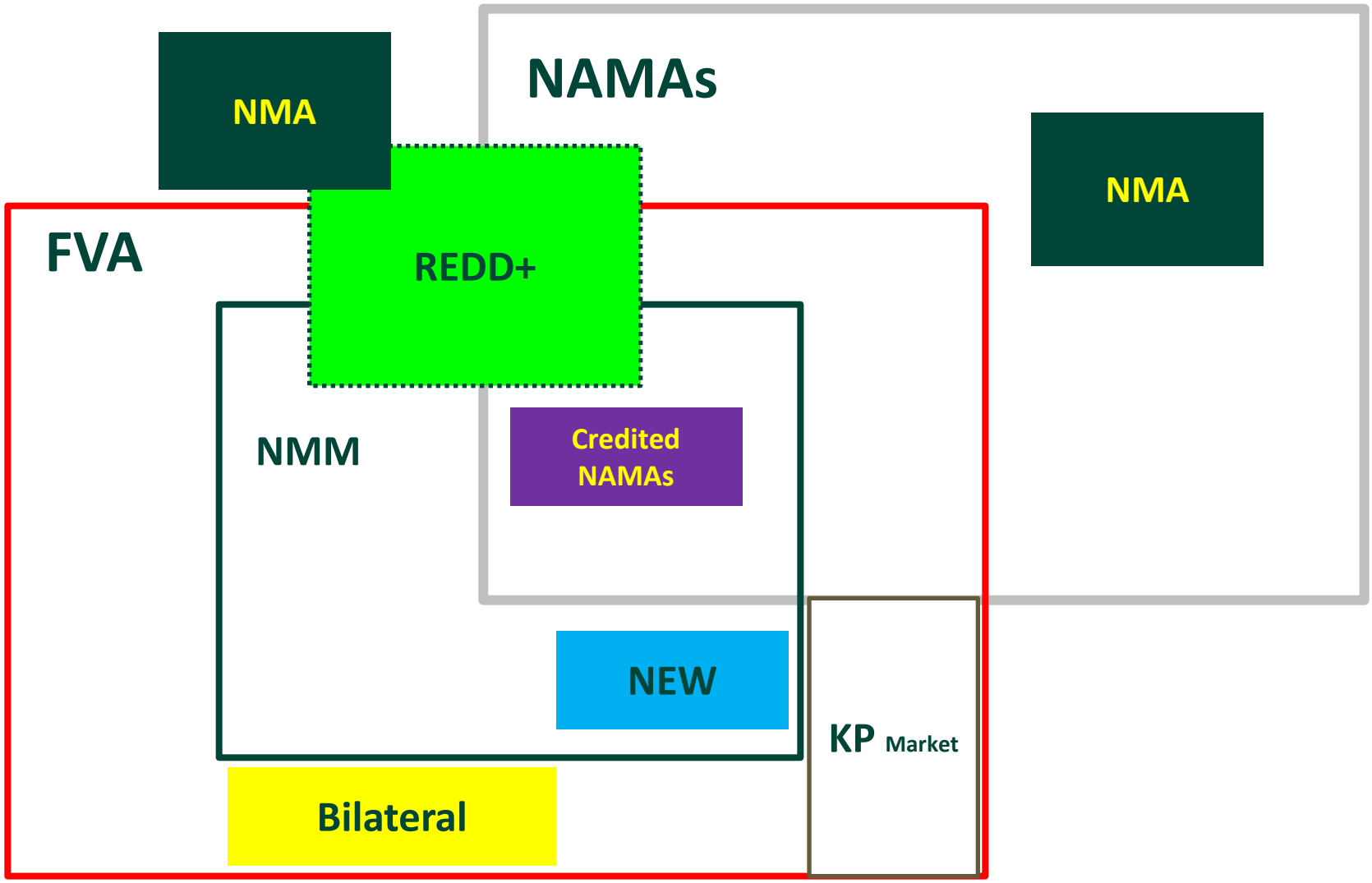
UNFCCC carbon markets negotiations



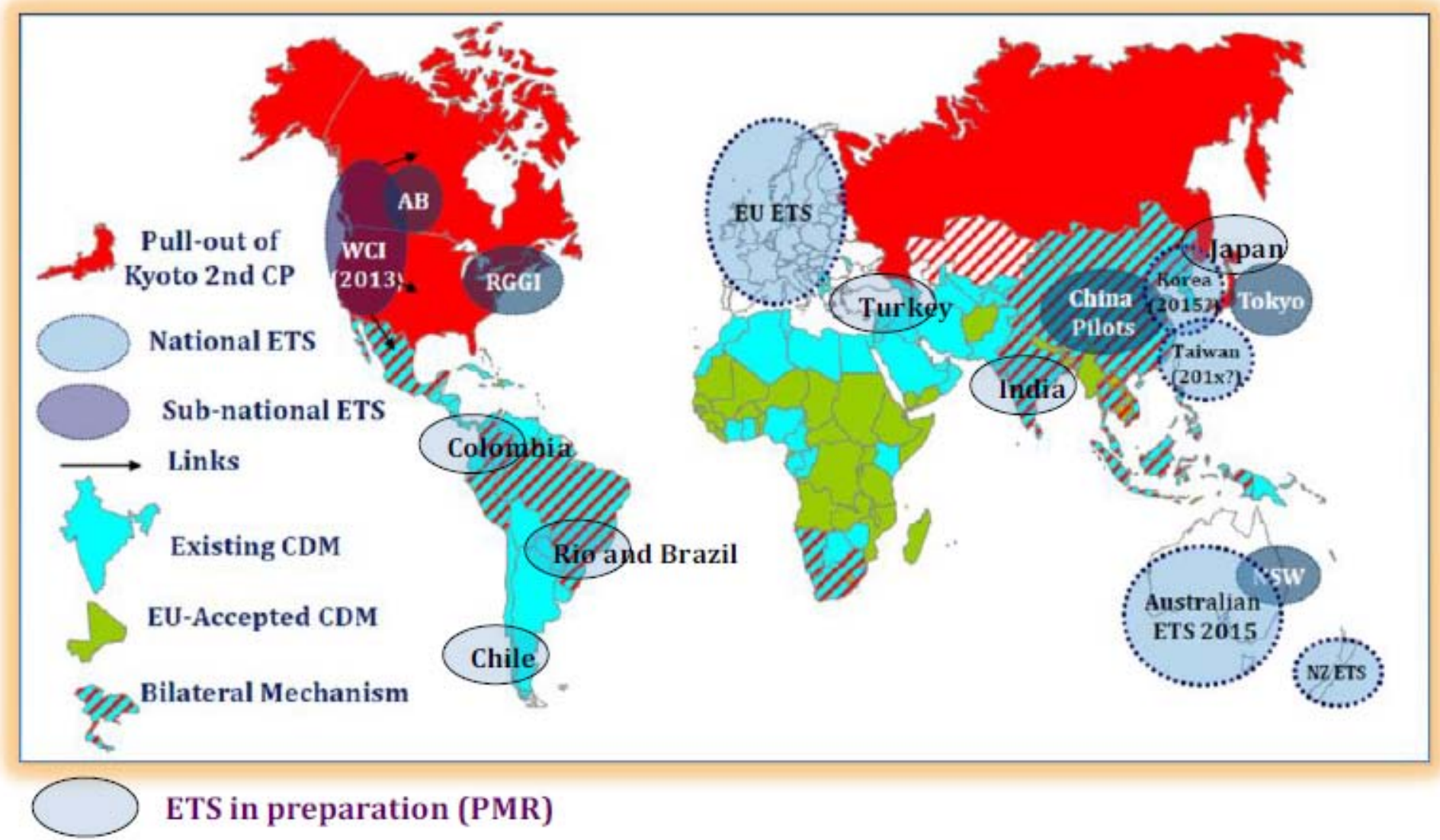
Framework on Various Approaches (FVA), New Market Mechanism (NMM), and Non Market Approach (NMA)



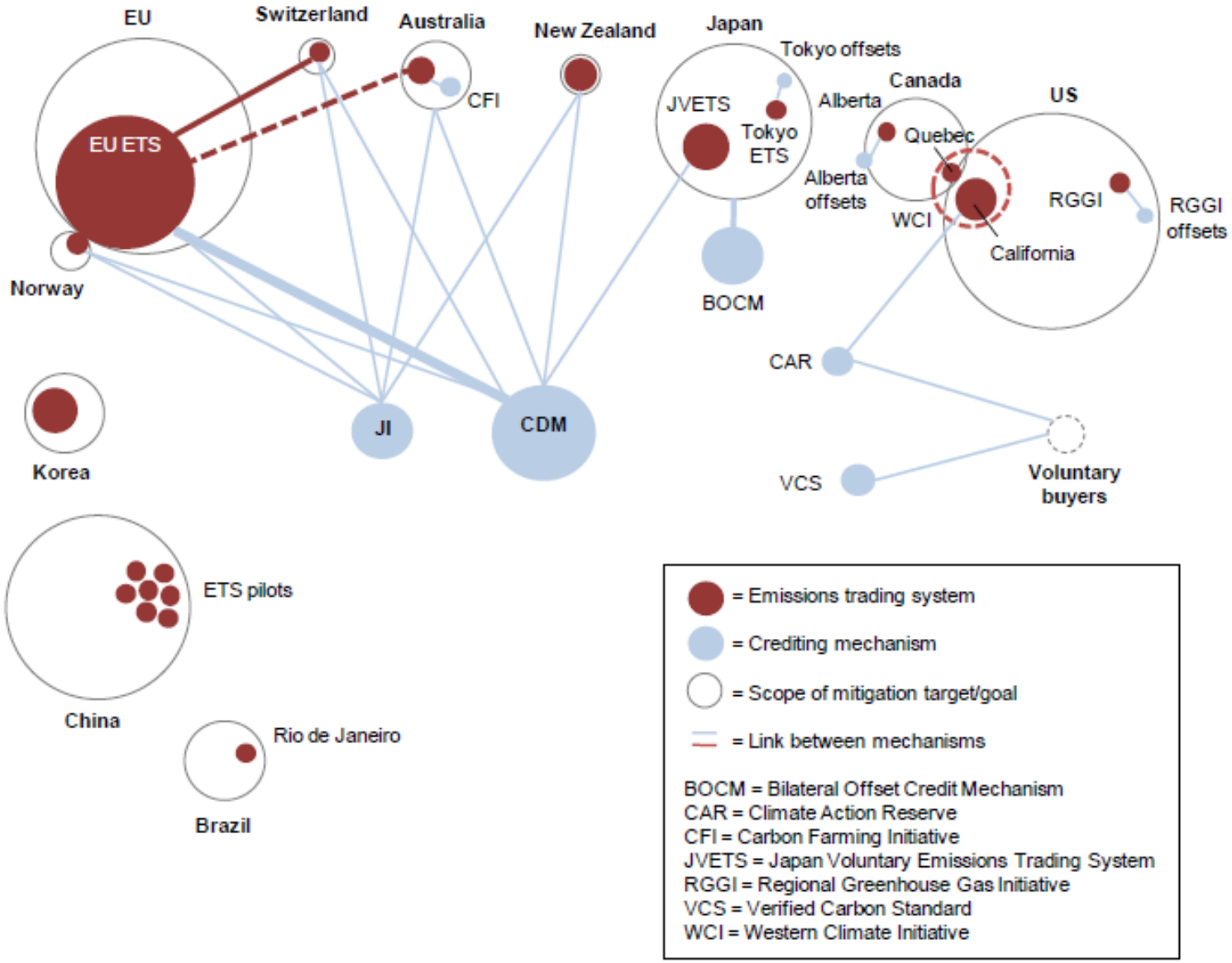
How to put together all of the initiatives on desk?



Carbon market development beyond UNFCCC negotiation

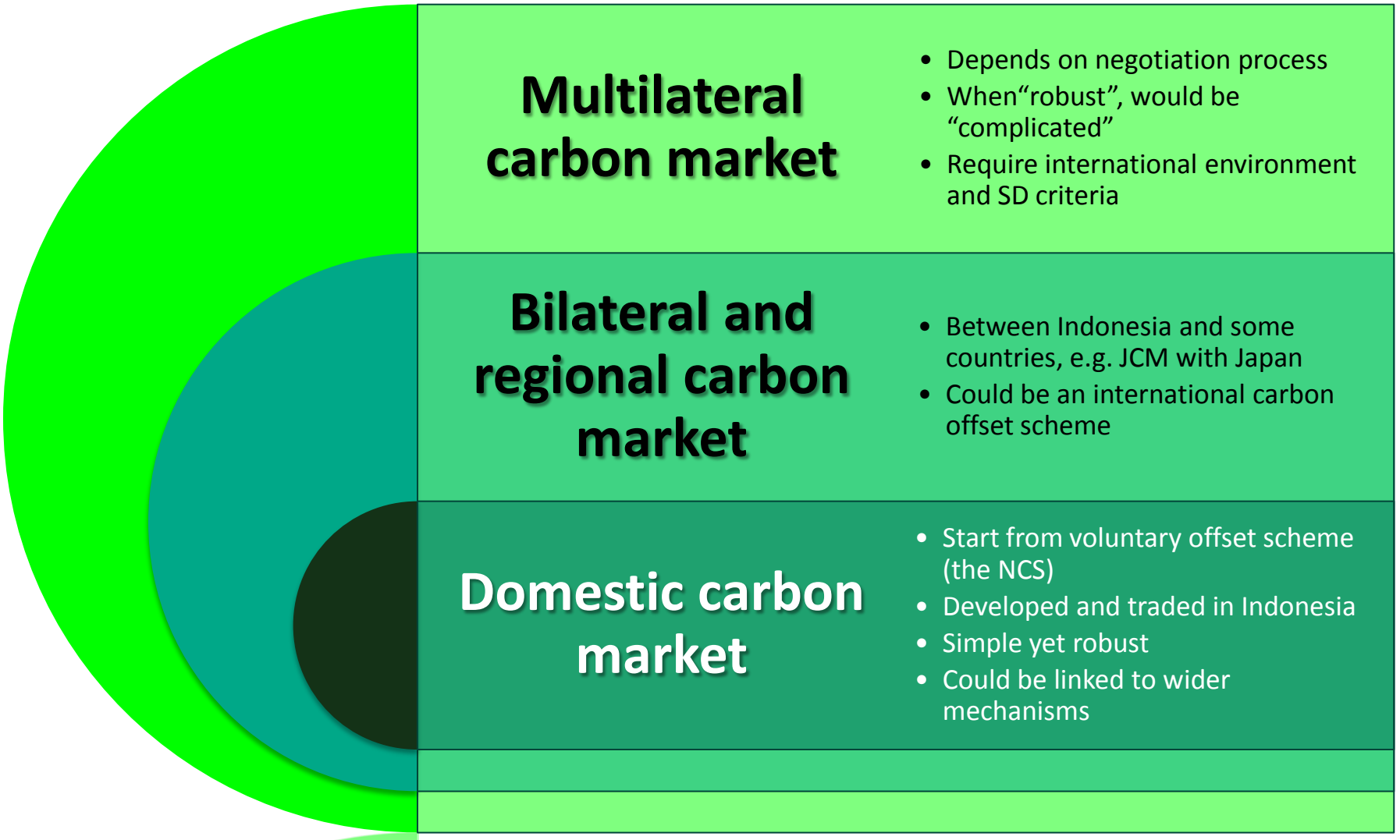


And the carbon markets linked...



Indonesia carbon market development strategy

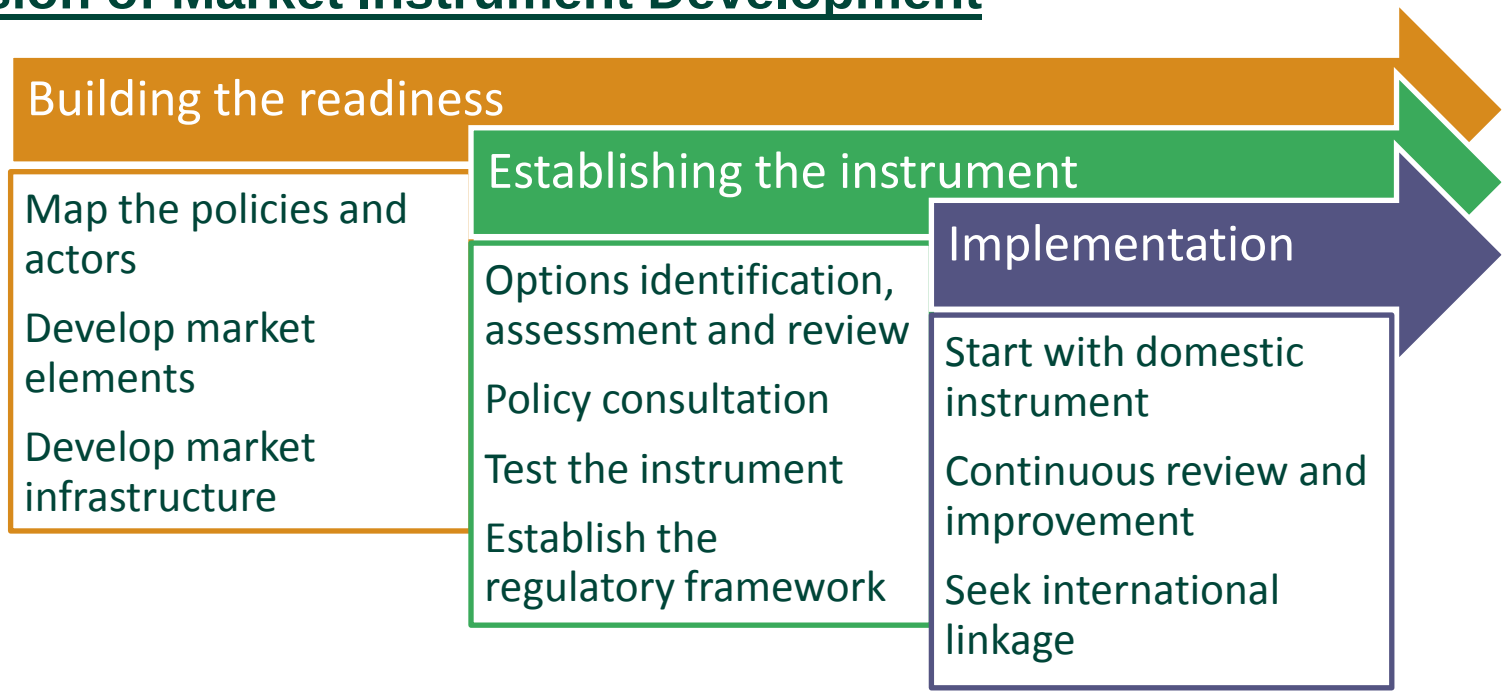
Indonesia is interested in further utilization of market instruments.



Role of market instruments

- Market integration could increase the effectiveness of climate change/low carbon development policies.
- Building market elements and readiness would encourage market integration into the existing/future mitigation policy.
- Sound analysis should be developed to support the decision making process.

Vision of Market Instrument Development



Bilateral and regional initiatives

Due to uncertainties in UNFCCC-led market mechanism(s), discussions and works in **bilateral/regional market mechanisms** becoming more important to scale-up mitigation actions in developing countries.

Joint Crediting Mechanism Indonesia - Japan

- Now under finalization, just one touch away
- A mechanism to encourage low emission cooperation between the two countries
- 57 Feasibility Studies already conducted by Japanese side in Indonesia

Asia – Pacific Carbon Market Roundtable

- An initiative led by New Zealand
- Provide a discussion forum for possible market cooperation between Asia Pacific countries

Domestic initiatives

- The Nusantara Carbon Scheme (NCS) is an example of market element now under development.
- NCS is a domestic voluntary GHG reduction certification and registration scheme based on SNI ISO 14064/14065.

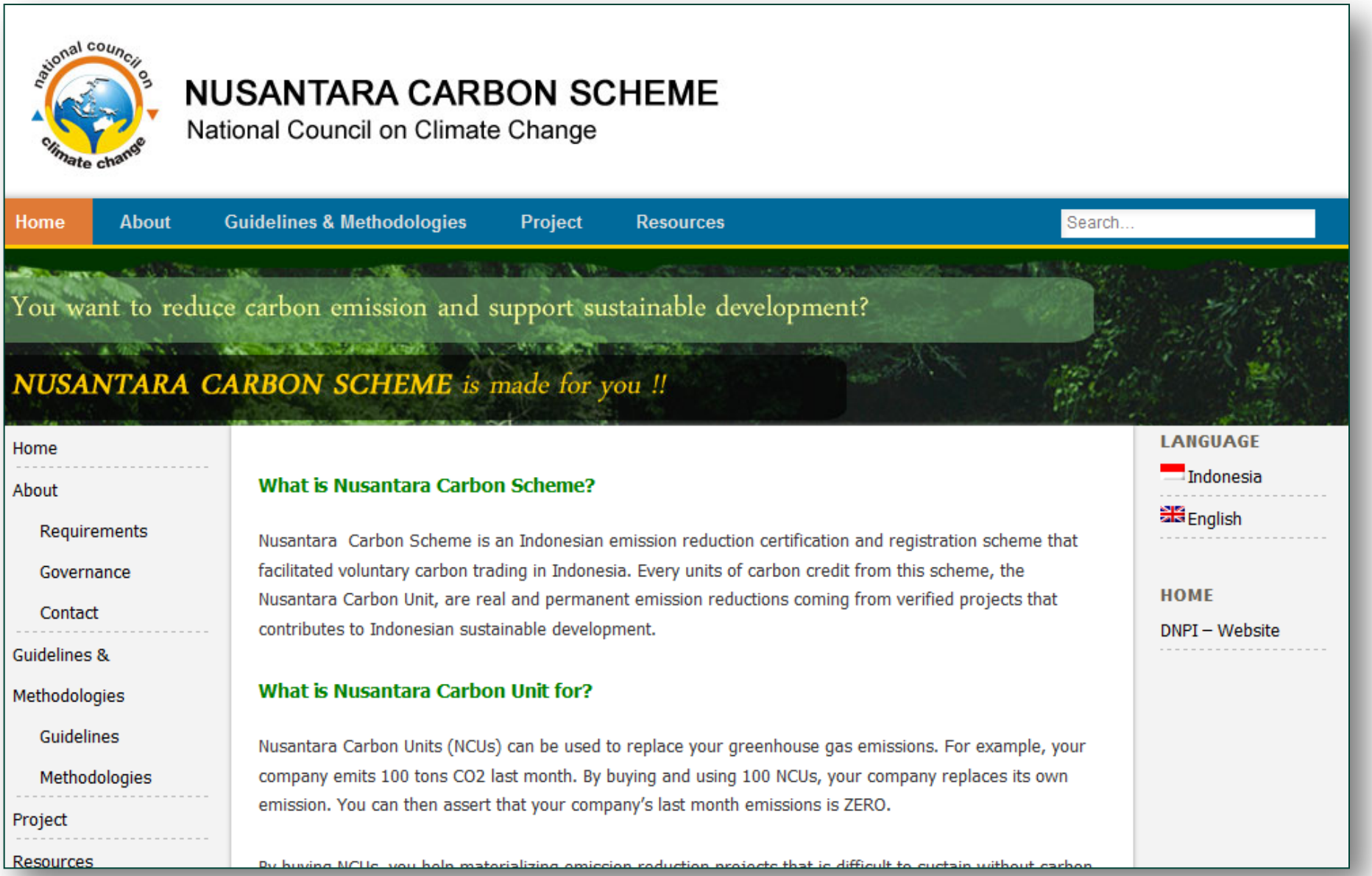
Current works on NCS:

- Website is online, http://skn.dnpi.go.id
- Second draft of the general rules & requirement and SD guidelines online for public comments
- Six methodologies on RE, EE, A/R, Waste, are now under review
- Guidelines for V/V and LULUCF projects under drafting
- Pilot project is planned this year

Envisioned role of NCS:

- Provide GHG offset to interested parties
- Raise market awareness
- Encourage local capacity improvement in carbon management
- When linked to wider policy, e.g. sector-wide, will serve as "damper" as well as bridging with ER activities outside the sector

Domestic initiatives



Carbon market readiness asessment in Indonesia

Eleven GoI initiatives of low carbon development were identified as possible to integrate market instrument in its implementation. Criterion were applied for further selection as follow:

1. ***Existing Laws, Policies and Regulations***: Are they capable of sustaining a market instrument?
2. ***Potential for GHG emission reductions***: Is there significant potential for GHG emission reduction in the activity?
3. ***Replicability***: Is the emission reduction mechanism transferable across sectors?
4. ***Technology***: Does it employs proven technology; not a technology being developed?
5. ***Return on Investment*** **(ROI)** for cost savings.
6. ***Industrial and Stakeholder Supports***
7. ***Experience in MRV***: Does the entities covered in the initiative has experience in MRV or data management ?
8. ***Existing standardized methodology for calculating the GHG emission reduction***
9. ***Sustainability***: Would the presence of a market instrument make the activities sustainable?
10. ***Initial investment***: Does it have its own initial capital investment or expect private sector participation to fund the activity?

MRV development and piloting in Indonesia

MRV System Development and Piloting

The objectives of MRV are to:

- ❑Support GHG reporting, management, and ultimately mitigation
- ❑Improve data accuracy, quality and consistency
- ❑Support related policies, programs, and strategies
- ❑Provide information to stakeholders
- ❑Support implementation of market-based instruments.
- ❑Serve as a benchmark for other sector.

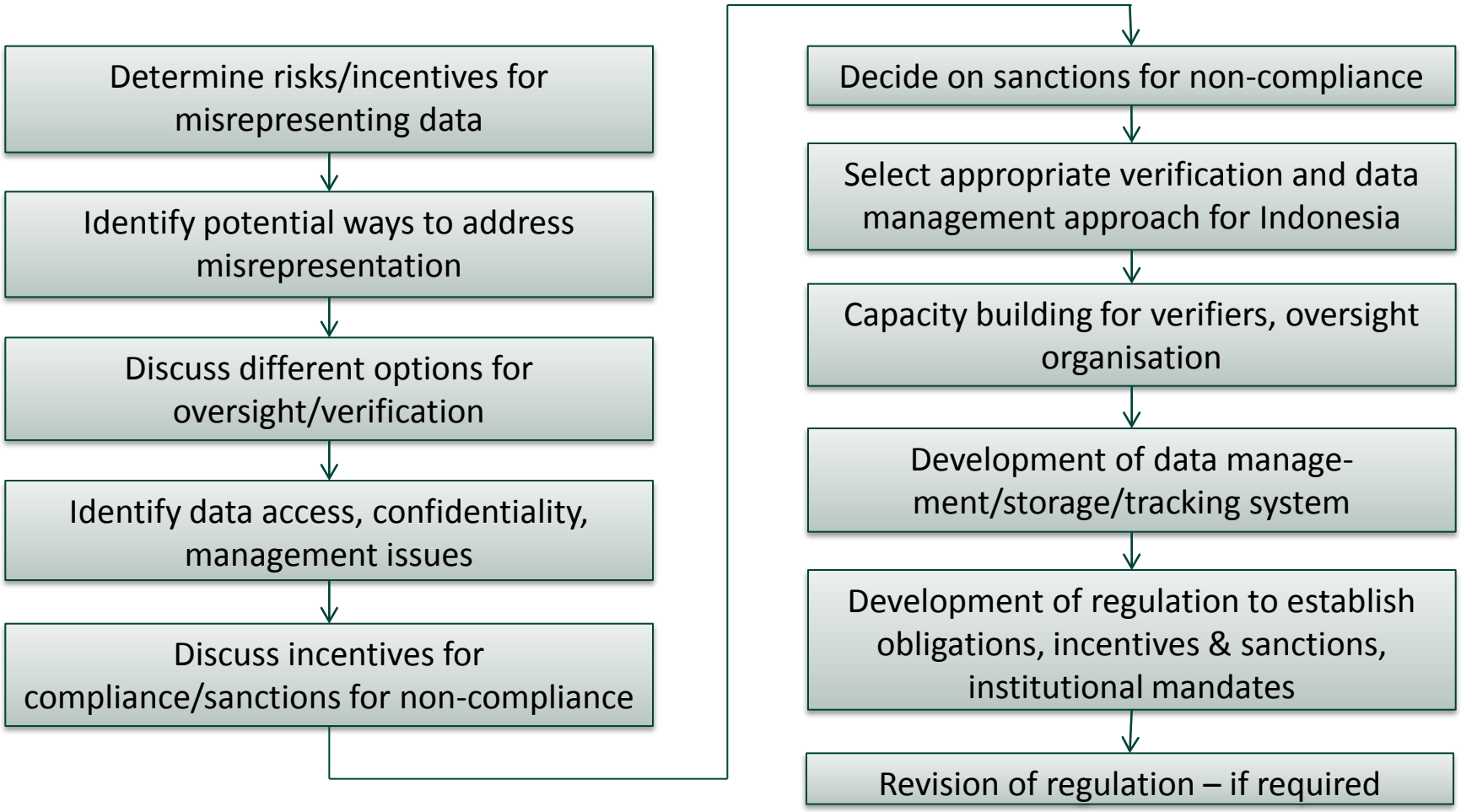
The MRV system will be implemented at both the level of individual installations and the level of governance (i.e., the policy framework for installation level activities). Thus the development works will be divided into **Governance Track** and **Piloting Track**.

This MRP proposes to develop and pilot MRV systems for:

- ❑***electricity generation*** – with the JAMALI interconnected grid as the pilot sector; and
- ❑***energy intensive industries*** – with cement production as pilot sector.

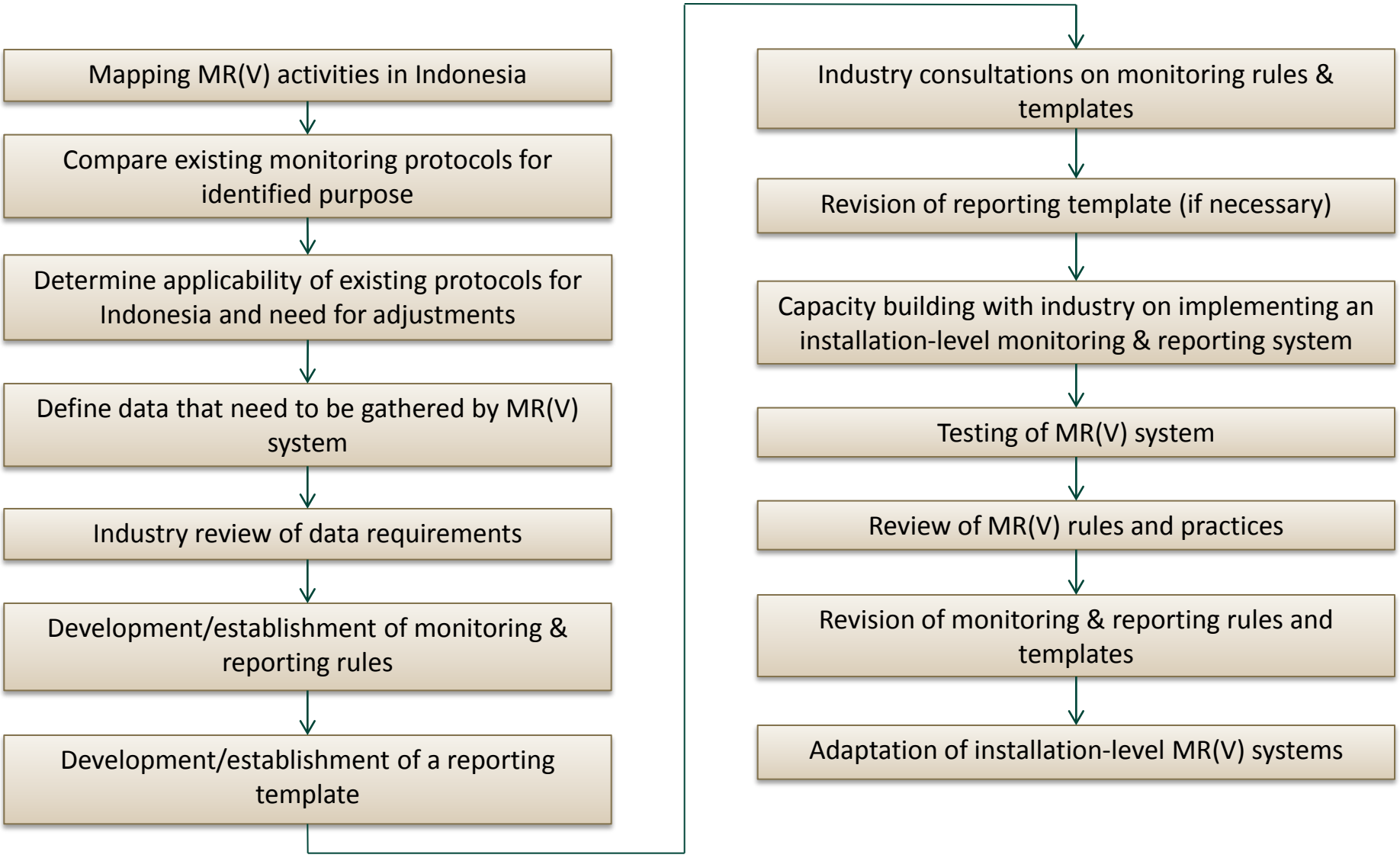
MRV in governance track

Envisioned Works in Governance Track

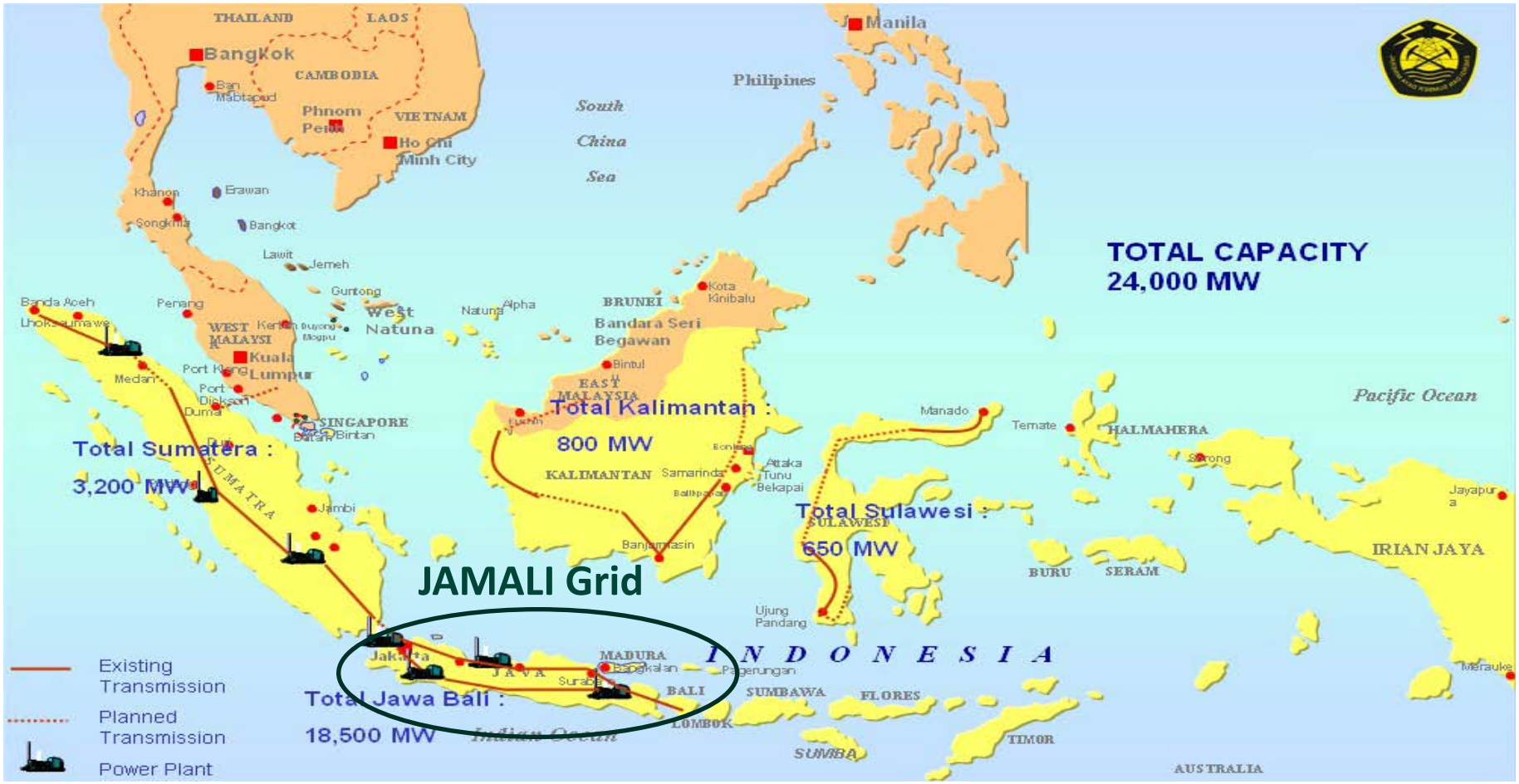


MRV in piloting track

Envisioned Works in Piloting Track

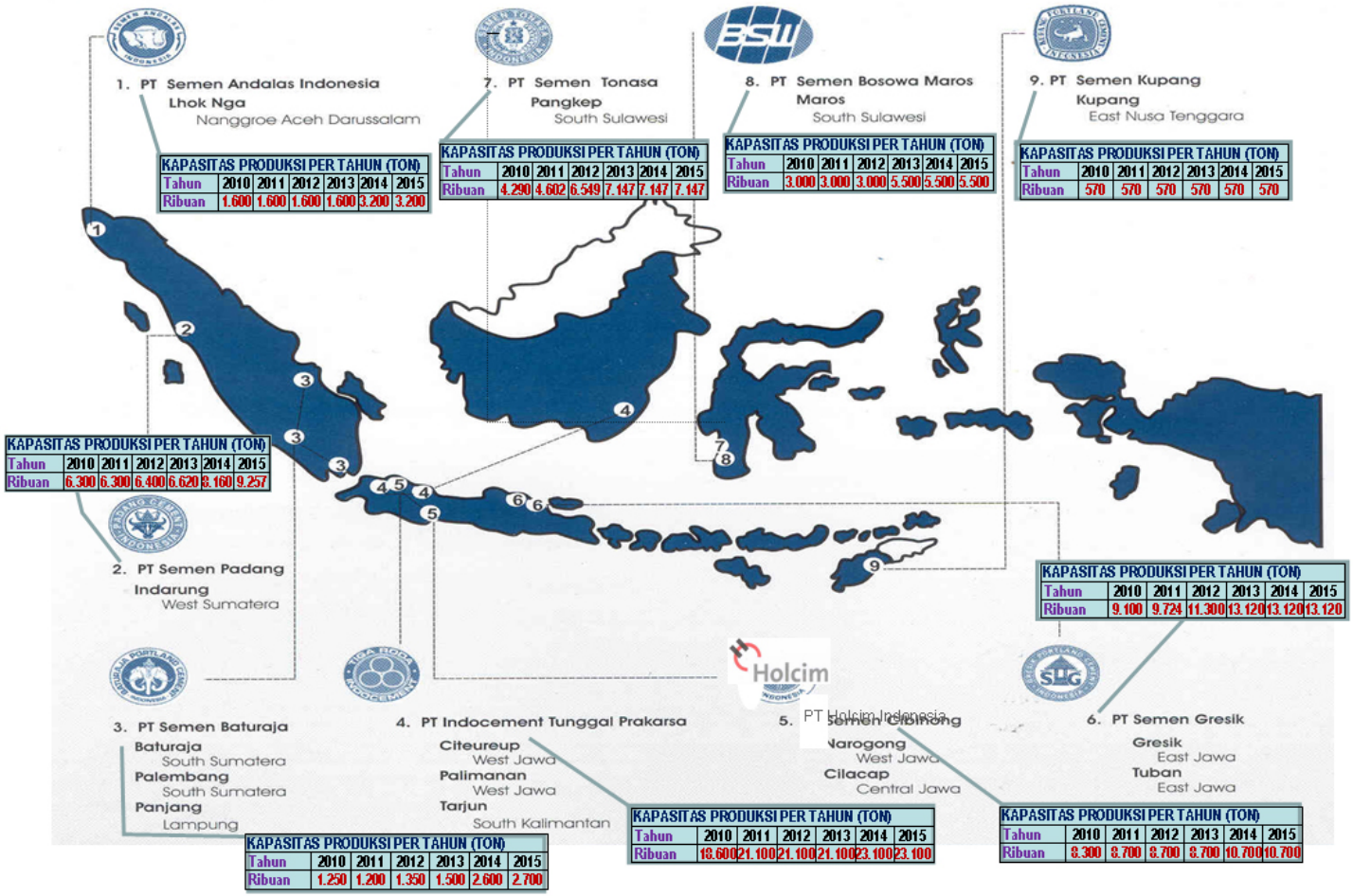


Java-Madura-Bali electricity grid: Pilot Area-1



The Java-Madura-Bali or JAMALI grid is the biggest interconnected electricity system in Indonesia, and comprises more than 60 power plants including 38 coal-fired power plants. Estimated emission generation from the JAMALI grid is 86.9 $MtCO_2$ (2010) or around 20% of the year's national energy-related emissions.

The cement sub sector: Pilot Area-2



Currently there are 14 plants of 9 cement companies in Indonesia. GHG emissions is projected to increase from 37 MtCO2e in 2009 to 60 MtCO2e in 2030. Cement is the first sector in Indonesia that has GHG emissions reduction policy, i.e. 3% under 2009 emission intensity in 2020.

Planning for a market-based instrument

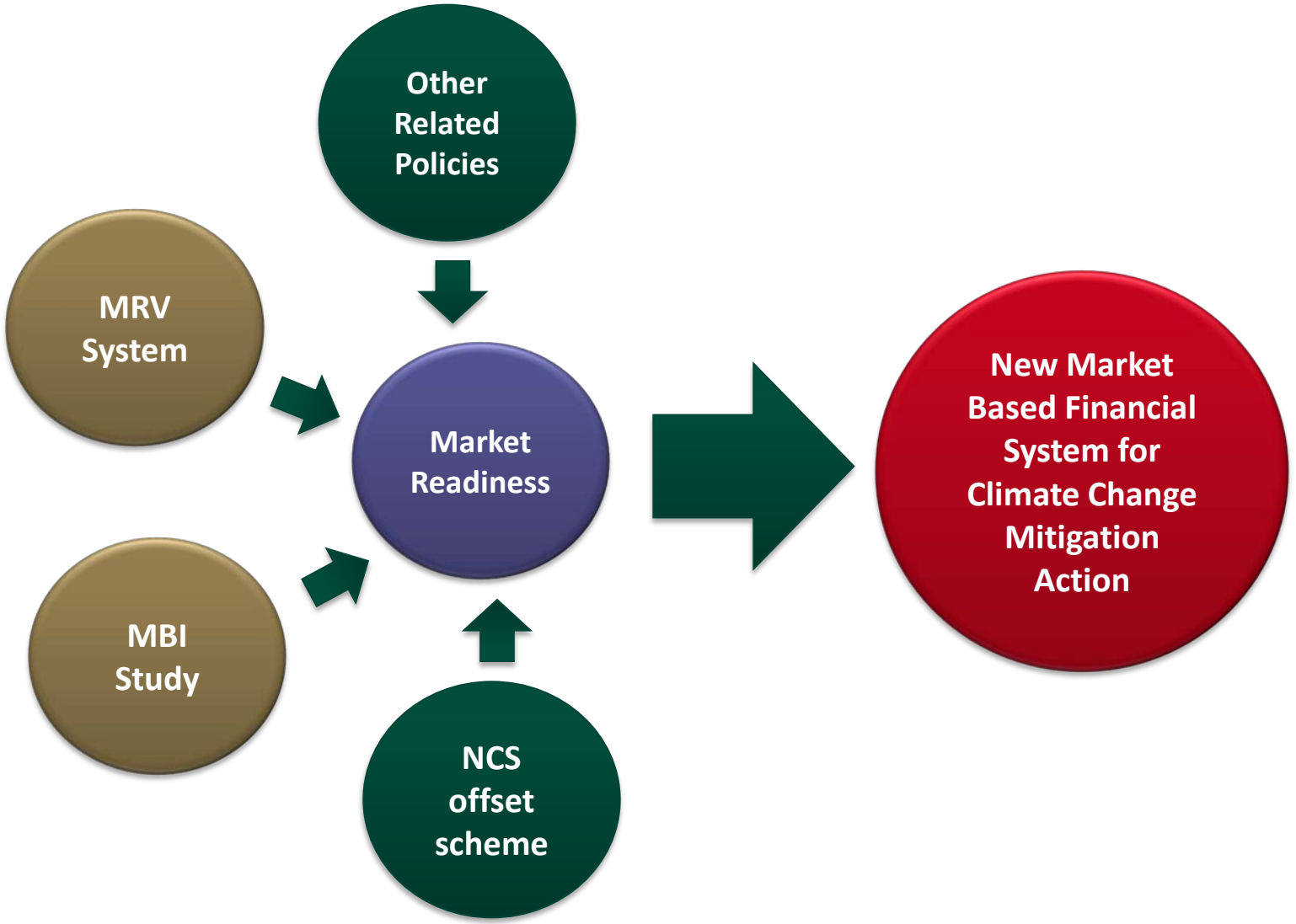
Objectives

1. Review of existing regulatory approach, MBI and their implementation for GHG mitigation in various countries;
2. Selection of MBI that is suitable for Indonesia;
3. Review various aspects that need to be considered for a proper implementaion of MBI;
4. Selection of sector for pilot study;
5. Gap analysis in general and for selected sector toward implementation;
6. Concept design of suitable MBI for Indonesia;
7. Action plan and road map for MBI implementation, which includes development of required policies and institutional arrangements, and other required aspects for successful MBI implementation.

Deliverables

1. A comprehensive assessment report on MBI options for Indonesia.
2. Design of selected market-based instruments for the selected sector.
3. Draft policy(ies) required for the establishment and implementation of MBI.
4. Piloting of the designed instrument(s).

Indonesia future market-based mechanism



Terima kasih!
Tararengkyu!