



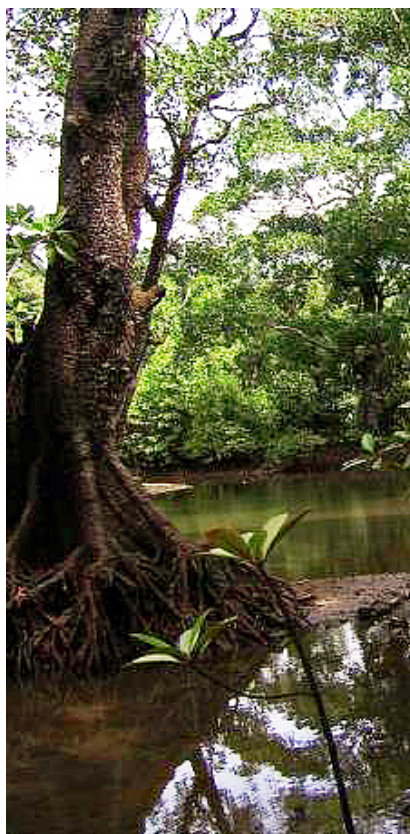
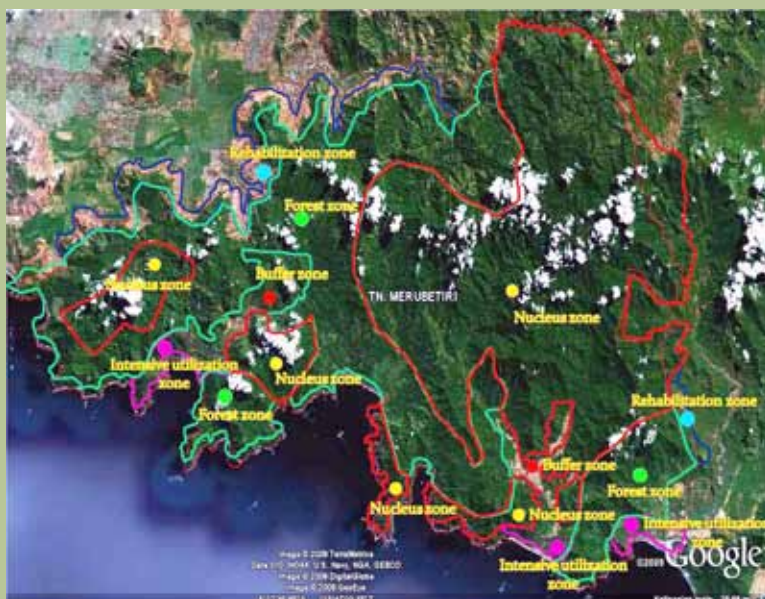
MRV is:

- Measure gains from baseline in CO₂-e supported by data from GHGs inventory and institutional building
- Involve all emission reduction from all activities
- Ministerial of Forestry Decree No. 30/2009 provide starting point for MRV guidelines

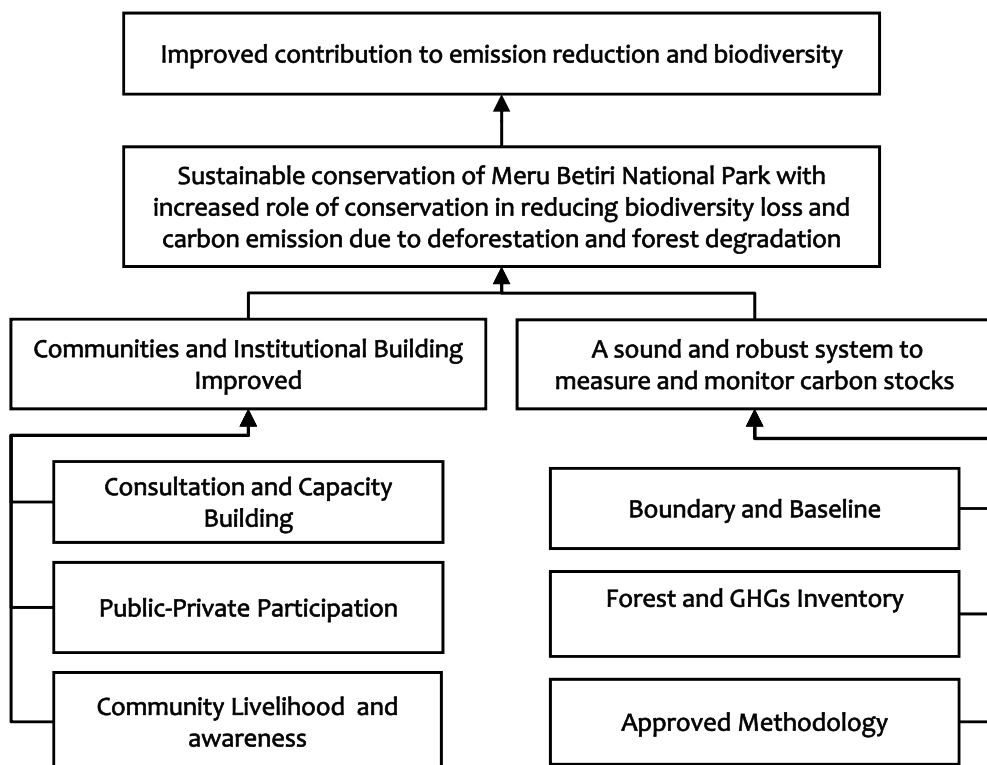
Public Private Partnership for measuring and monitoring carbon and biodiversity

Public private partnership for for measuring, reporting, and verifying emission and carbon enhancement are critical for sustainable forest management, where communities livelihood are needed to be in place.

Meru Betiri National Park's demonstration activity (DA) aims to develop a real, long-term and measurable system for monitoring emission reductions from deforestation, forest degradation and enhancement of forest carbon stocks through community, public and private participation.



Information Needed





Four Year 3 Stage Plan

As one of the first DA, MBNP intend for a community self-controlling ecosystem that brings benefits to communities, stakeholders, forest services, and climate by developing MRV systems. To achieve this, the DA is focused in Four Year 3 Stage Plan

Four Year 3 Stage Plan

Phase 1 (2010-2011)

- Establish comprehensive framework-stakeholders engagement
- Establish of PSP and data collection for carbon accounting

Transitional (2011-2012)

- Consolidate Phase 1
- Develop Activities for Phase 2 (applied methods for carbon accounting)

Phase 2 (2012-2013)

- Develop comprehensive capacity (communities, public and private)
- Develop comprehensive capability (all pools and applied tool)
- Dissemination

Table 1. Forest Types by Zonation in. MBNP, 1999

No.	Forest Ecosystem	Zone (Ha)					Total Area
		Nucleus	Forest	Intensive Utilization	Buffer	Rehabilitation	
1	Mangrove	-	7 (0.03)	-	-	-	7 (0.01)
2	Coastal	620 (2.22)	675 (2.98)	925 (71.98)	-	-	2.220 (3.83)
3	Swamp	-	25 (0.11)	-	-	-	25 (0.04)
4	Tropical Rainforest	23.870 (85.51)	20.340 (89.91)	-	2.155 (100.0)	3.573 (88.81)	49.938 (86.10)
5	Bamboo Forest	3.425 (12.27)	1.575 (6.96)	360 (28.02)	-	450 (11.19)	5.810 (10.02)
Area (Ha)		27.915 (48.13)	22.622 (39.00)	1.285 (2.22)	2.155 (3.72)	4.023 (6.94)	58.000 (100.00)

Source: Based on Directorate Jenderal Decree No. 185/99
 Note : Number in parantheses is percentage from total

Accounting of carbon stock involves measuring from 5 pool of carbon (IPCC, 2007). i.e.,

- Aboveground living biomass
- Belowground living biomass
- Necromass
- Dead organic matter (DOM)
- Soils

Three general methods for monitoring changes in carbon stocks and their respective baseline would be from computer modelling, remote sensing and field/site measurements.

Intergovernmental Panel on Climate Change (IPCC) and Voluntary Carbon Standard (VCS) Guidelines

IPCC GL 2006 would be applied for inventory and emission reduction. In general, there are two basic elements needed for the inventory, namely (i) Land Change Matrix (LCM), i.e., data from land uses changes on 6 categories of land (forest land, crop land, grass land, wet land, settlement, and other land), and (ii) emission factor/removal, i.e., the ability of vegetation/forest/ carbon pool to grow and store carbon.

VSC process would be reviewed for measuring and verifying carbon credits. This including steps (scope of activities, boundary, baseline, risk management, and monitoring change), and requirements for processes such as risk assessment and buffer reserved of carbon.



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