

An aerial photograph of the IPB Eco/Green Campus in Dramaga, Bogor, Indonesia. The campus is nestled in a lush green forest. In the background, the iconic Mount Salak is visible under a clear sky. The text is overlaid on the top half of the image.

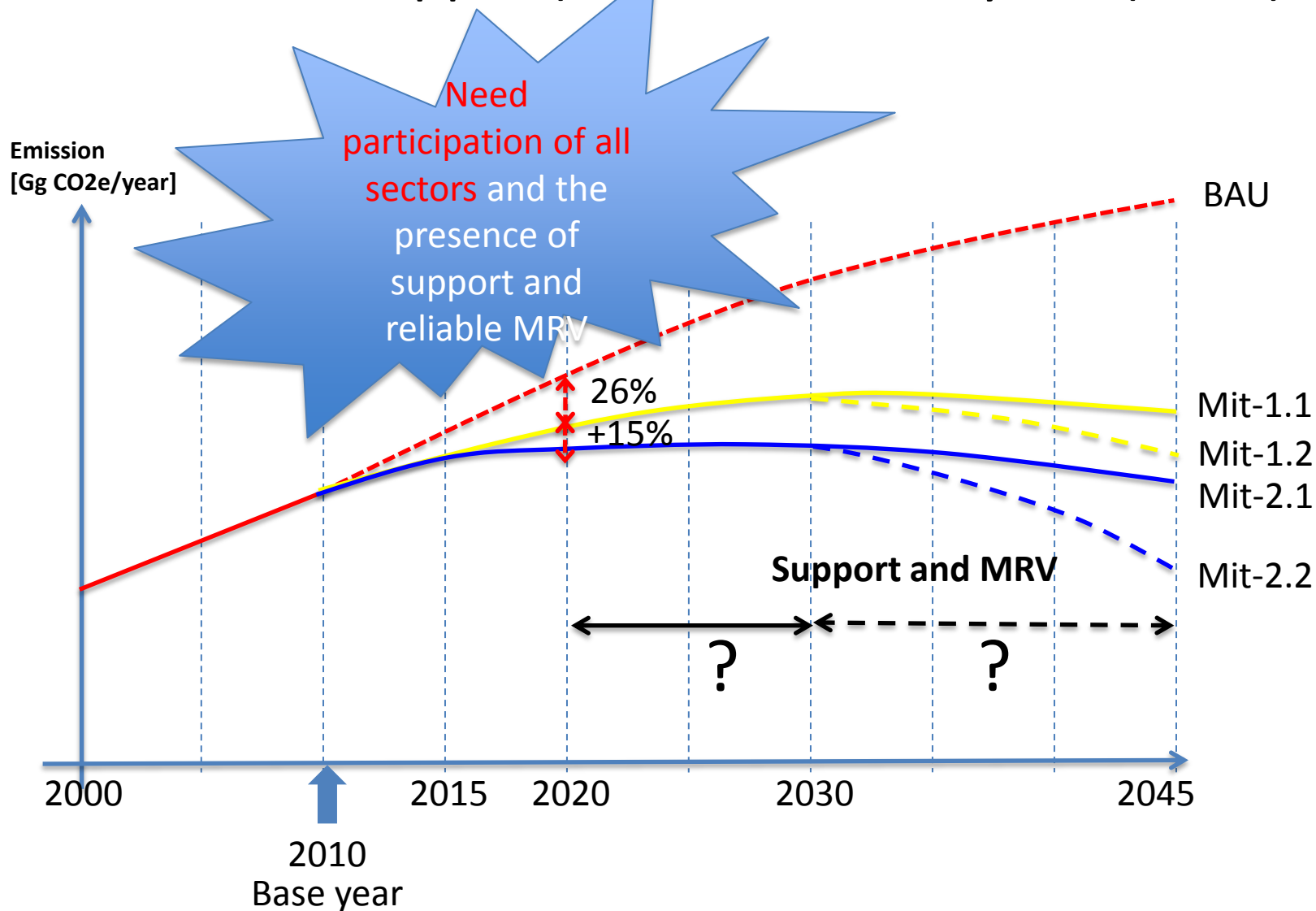
DEVELOPING INNOVATIVE MRV SYSTEM TO SUPPORT THE REALIZATION OF ECO/GREEN CAMPUS IPB

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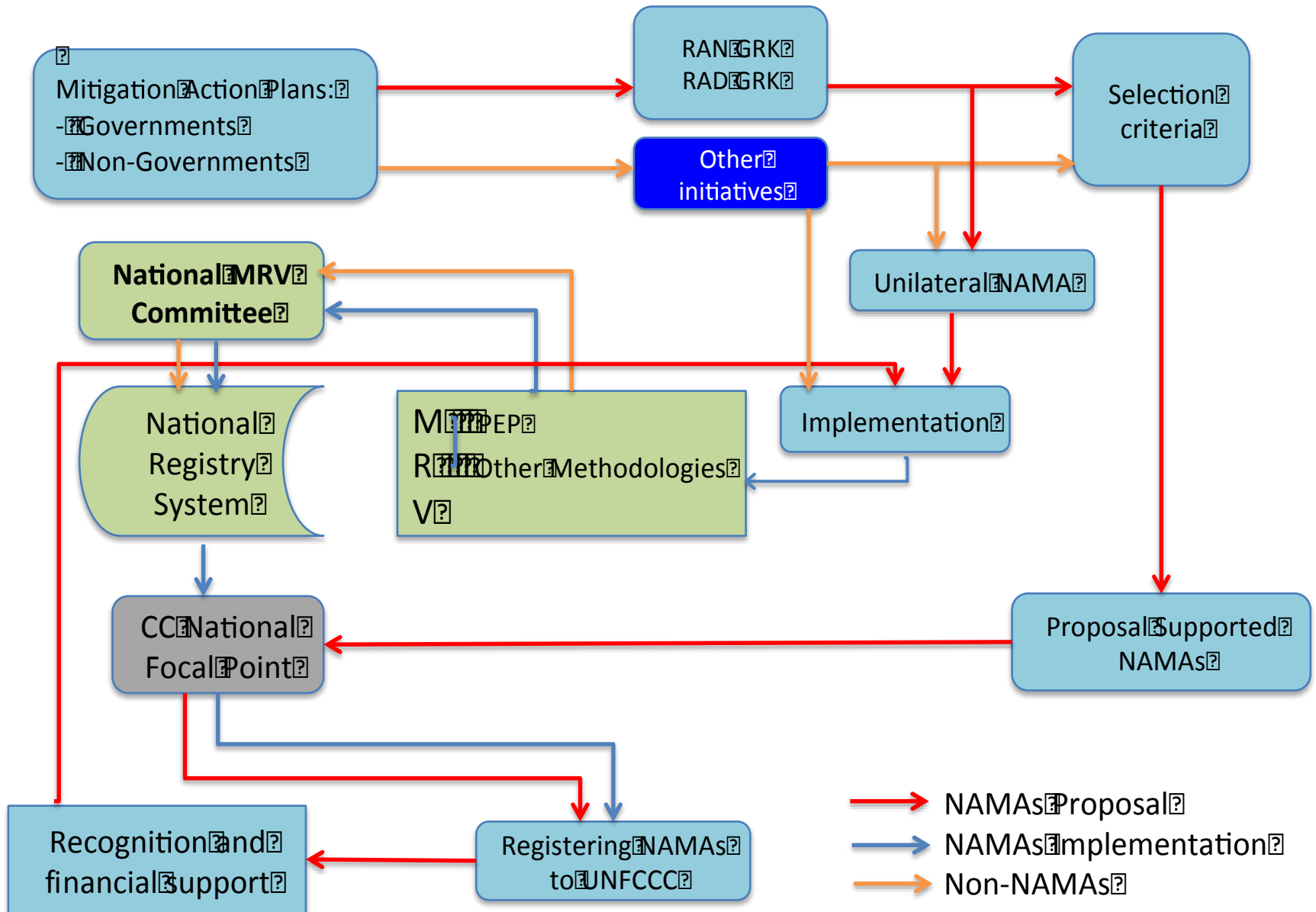
Centre for Climate Risk and Opportunity Management in
Southeast Asia and Pacific of Bogor Agricultural University

ECO/Green Campus of IPB Dramaga with Mount Salak Background

Indonesia Emission Reduction Target (26%+15% with International Support) by 2020 and beyond (INDC)



MoE Regulation No.15/2013 on MRV



Objective: Realization of IPB Campus that are conducive for a successful learning process, environmentally friendly, Comfortable and safe for supporting the sustainable agro-eco-edu-tourism



IPB ECO/GREEN
CAMPUS 2020

Elements of Eco/Green Campus



Green movement

Green transportation



FOUR elements of Eco/Green Campus

Green energy



Green building/open space



GREEN TRANSPORTATION

- ★ Transportation mode without fossil fuel or with zero emission
 - ★ Electric car for transporting student between building within campus (IPB at present already operates electric cars)
 - ★ Electric bicycle/Gowes, Electric motor bike → **Proposed Program: OSOB** (one student one bicycle)
- ★ Traffic regulation within campus
 - ★ Number of electric car, route and time schedule
 - ★ Terminal feeder and charging facility as well as portable charger



ECO/GREEN ENERGY

- ★ Improving energy use efficiency in all utilities and buildings
- ★ Reducing the use of energy from fossil fuel
 - ★ Solar cell – Main road in campus already use solar PV
 - ★ Micro hydro for substituting Electricity from PLN
 - ★ Advancement of research on biomass-based-energy



ECO/GREEN BUILDING & ECO/GREEN OPEN SPACE

- ★ Limiting the use of AC by improving air circulation system in all buildings
- ★ Greening parking areas for improving the comfort and beauty of the campus
- ★ Developing agricultural germ-plasm collection for supporting greening program in campus



ECO/GREEN MOVEMENT

- ★ Change mindset, attitude, and behavior of faculties to be more oriented to environmental friendliness, awareness campaign, massive social movement, **green champions**, etc.
- ★ Construction of the canopy as pedestrian corridor
- ★ Realizing “*zero waste campus*”:
 - ★ Sorting and processing of waste (soil, liquid, gases and organic)
 - ★ Use of easily degradable materials.



IPB has implemented many Community Development Program related to low carbon society surrounding and outside campus in collaboration with many agencies national and international



Community Development Activity surrounding IPB campus: Composting, biopori, bricket etc.



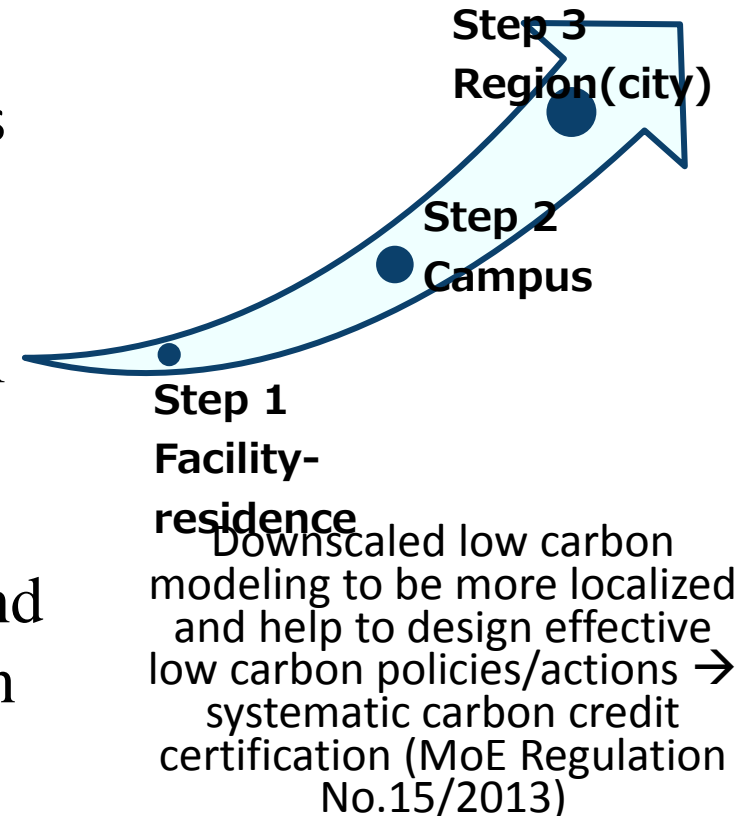
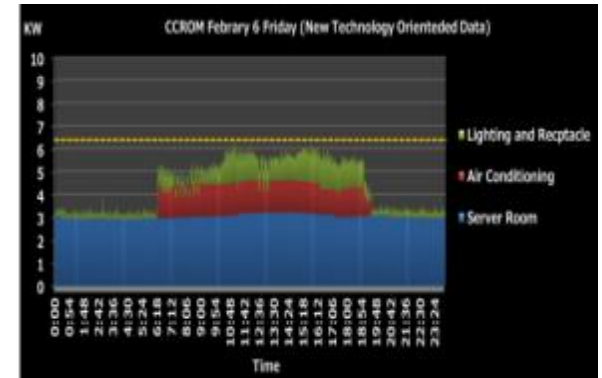
New IPB Master Plan 2010-2030

- IPB is now entering the 3rd Stage of its development – Recondition. Master Plan of 1989 is revised for Master Plan Campus of 2010-2030
- The new Master Plan is designed to fit the real needs and condition and make it relevant to the changes in internal and external campus at present and future.
- ***All elements of Eco/green campus will be integrated into the master plan***



Development of Innovative MRV System

- Innovative monitoring system research (2014-2017)
 - Understanding pattern of energy consumption at facilities at IPB campus → campaign for awareness rising and change of mindset, attitude, and behavior of faculties (eco green movements) and low carbon policies in Campus
 - Reducing uncertainty of statistical data → reliable measurement and reporting → Integrated modeling research for low carbon society and urban and regional eco-city design model and simulation research



FY2014 Innovative Monitoring System at IPB Campus

