INDONESIA -
LESSON LEARNED FROM INTENDED NATIONALLY DETERMINED CONTRIBUTION (INDC) IN AFOLU SECTOR

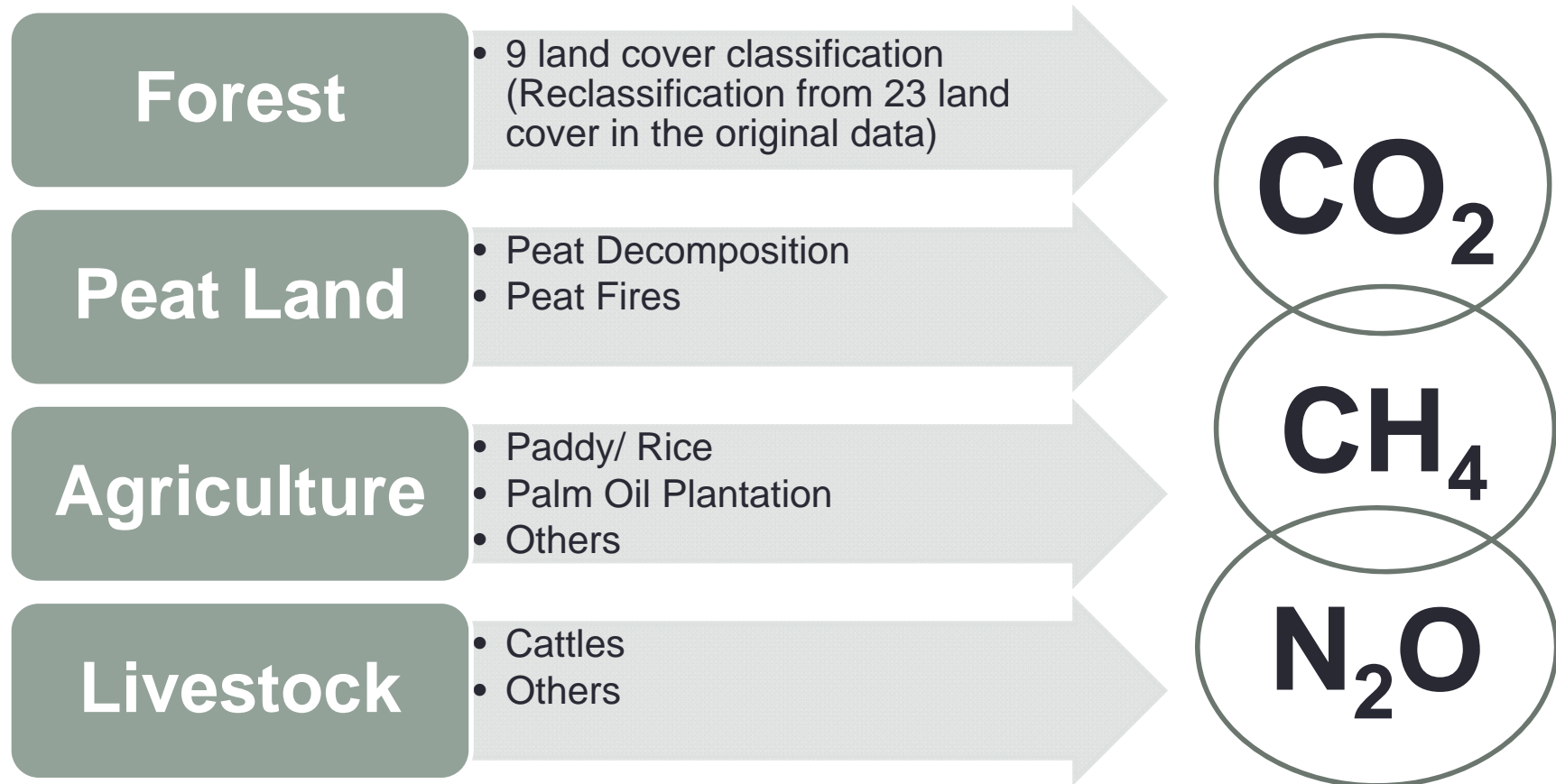**Dr. Medrilzam**

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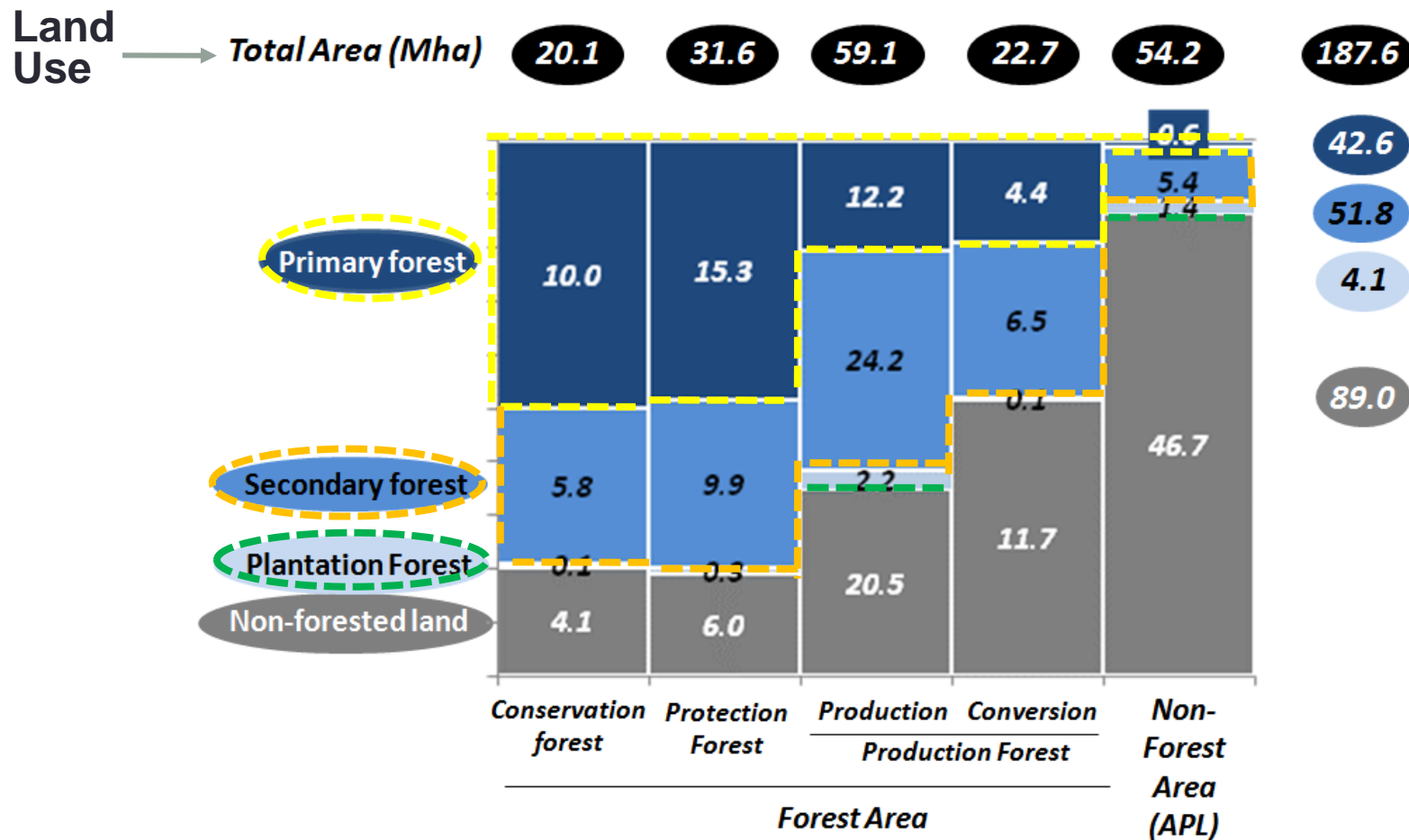**National Development Planning Agency (BAPPENAS)**

Presented at the 24th Asia-Pacific Seminar on Climate Change on Indented Nationally Determined Contributions (INDCs)

Bangkok, 29-30 June 2015

Boundary/Scope of Forest and Land Based Sector Model

WHAT DO WE MEASURE? Emission from …

Forest
- 9 land cover classification (Reclassification from 23 land cover in the original data)

Peat Land
- Peat Decomposition
- Peat Fires

Agriculture
- Paddy/ Rice
- Palm Oil Plantation
- Others

Livestock
- Cattles
- Others

CO_2

CH_4

N_2O

Boundary/Scope of Forest and Land Based Sector Model

Land Use → Total Area (Mha): 20.1 | 31.6 | 59.1 | 22.7 | 54.2 | 187.6

Land Use	Conservation forest	Protection Forest	Production	Conversion	Non-Forest Area (APL)	
Primary forest	10.0	15.3	12.2	4.4	0.6	42.6
Secondary forest	5.8	9.9	24.2	6.5	5.4	51.8
Plantation Forest	0.1	0.3	2.2	0.1	1.4	4.1
Non-forested land	4.1	6.0	20.5	11.7	46.7	89.0

Production Forest

Forest Area

Sumber: Indonesia 1st Biennial Update Report (BUR) (draft)

Steps to Estimate the Baseline from the Land-Based Sector (1):

1. Collect land cover from 2000,2003,2006,2011.

2. Reclassify 23 land cover categories into 9 categories for each forest function (e.g. conservation; protection; production; convertible production; other land use).

3. Measure the land cover transition among 9 categories from 2000-2003, 2003-2006 and 2006-2011.

4. Adjust the matrix by adopting tabular data from the Ministry of Agriculture for palm and paddy area

5. Adapt the matrix transition into stock-flow diagram in the System Dynamics model.

Steps to Estimate the Baseline from the Land-Based Sector (2)

6. Determined the drivers of the transition.

7. Connect the model structures from within and other sectors that influence the drivers. ➔ land-based is interdependent to other sectors

8. Peatland model is constructed separately, but still using 9 categories of land cover

STOCK DIFFERENCE METHOD IS USED TO MEASURE THE EMISSION FOR LAND BASED SECTOR

Examples of System Dynamic Modeling Sub-Structure on Forest and Land Cover
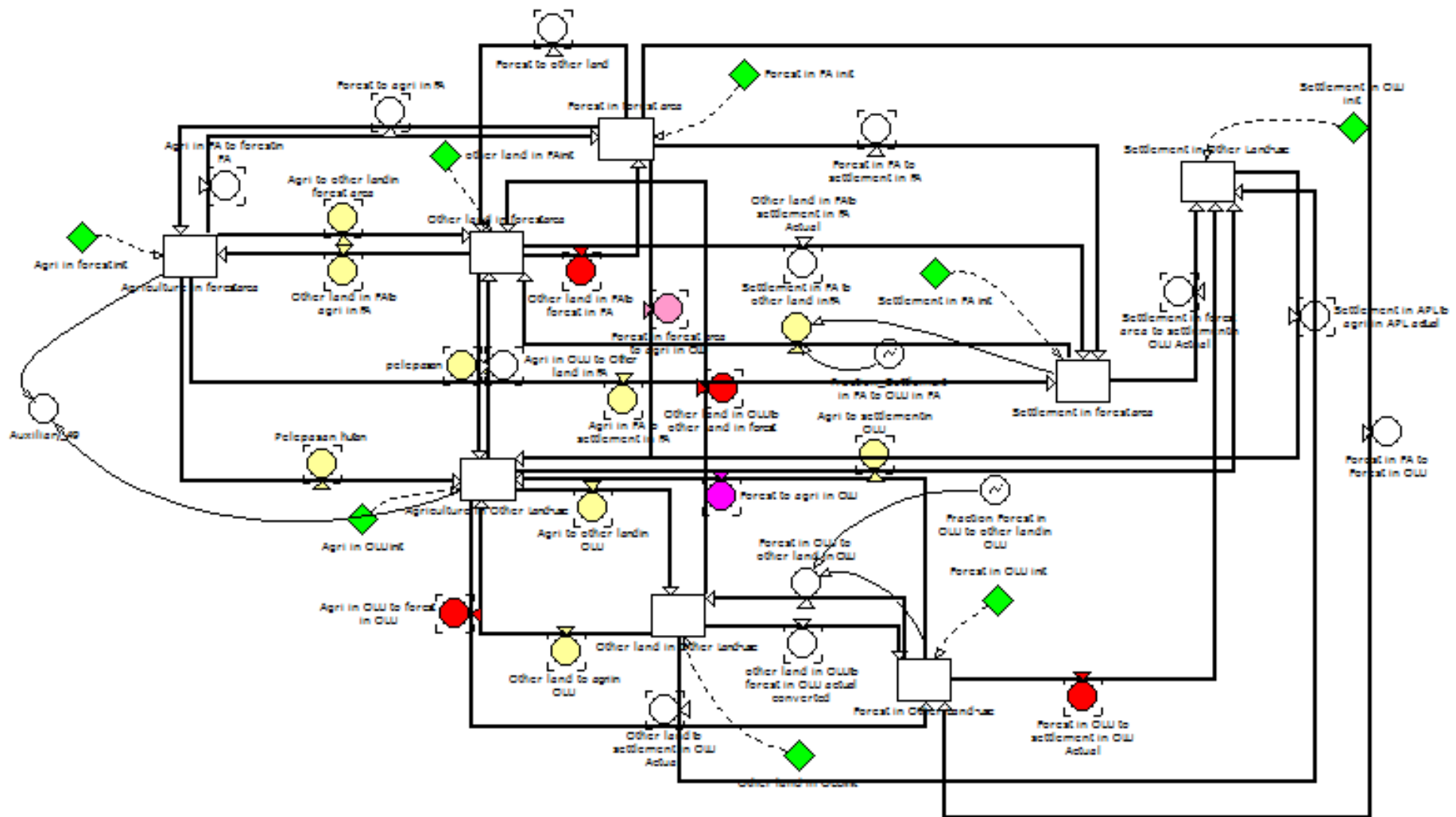
Challenges:

- Data availability and transparancy.
- Consistency between different data sets (spatial and tabular)
- Methodology selection process.
- Simulation model complexity.
- Projecting uncertain extreme events (peat fire, etc.).
- Policy coordination with non-forest line agencies causing the drivers of deforestation and forest degradation.
- Maintaining the continuation of the database.
- Awareness and understanding the decision makers.

Thank you for your attention

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