

LOW CARBON SOCIETY: *INTEGRATION OF LAND BASE SECTORAL PROGRAM AND CLIMATE CHANGE MITIGATION POLICIES*

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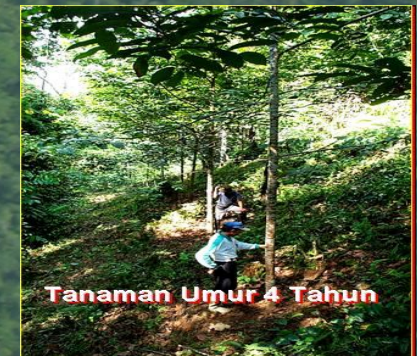
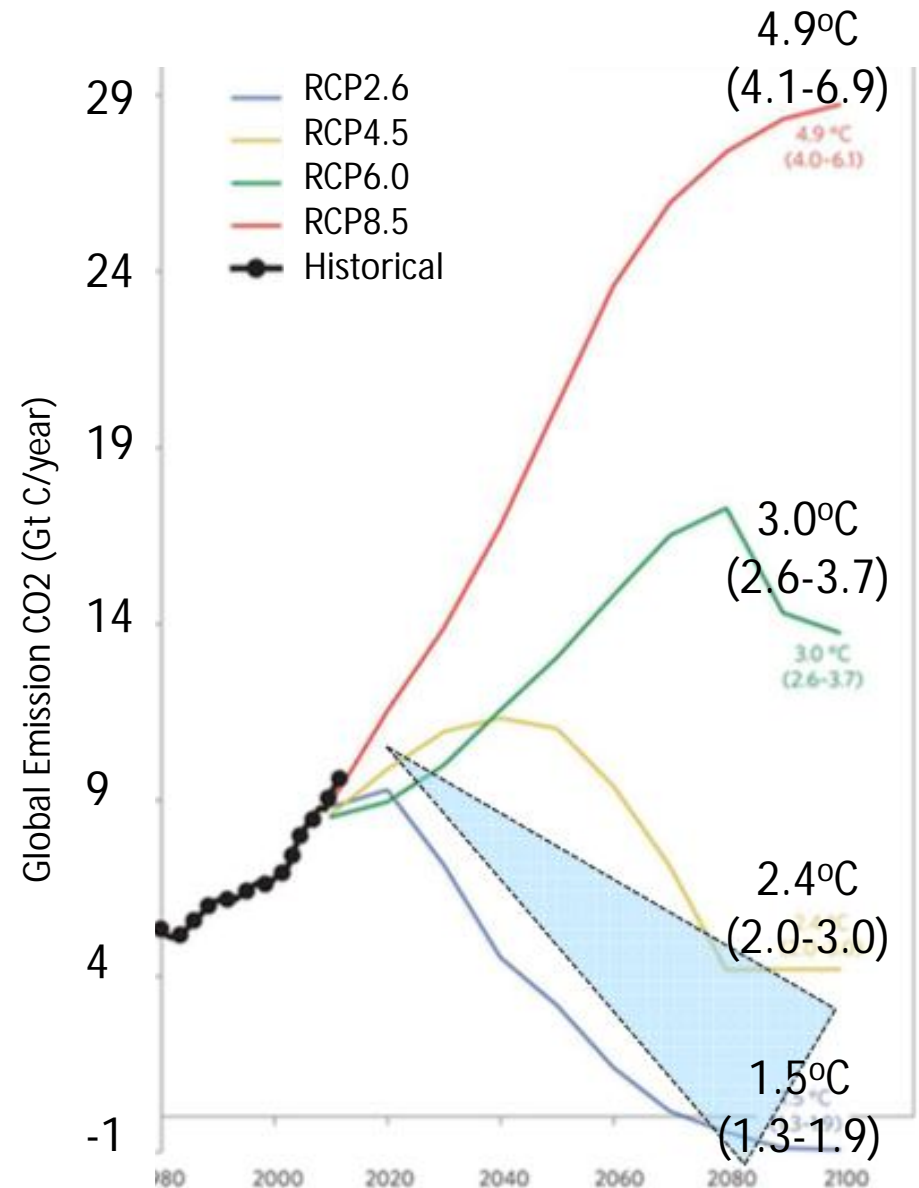


Photo SBK Documentation

Introduction: Paris Agreement

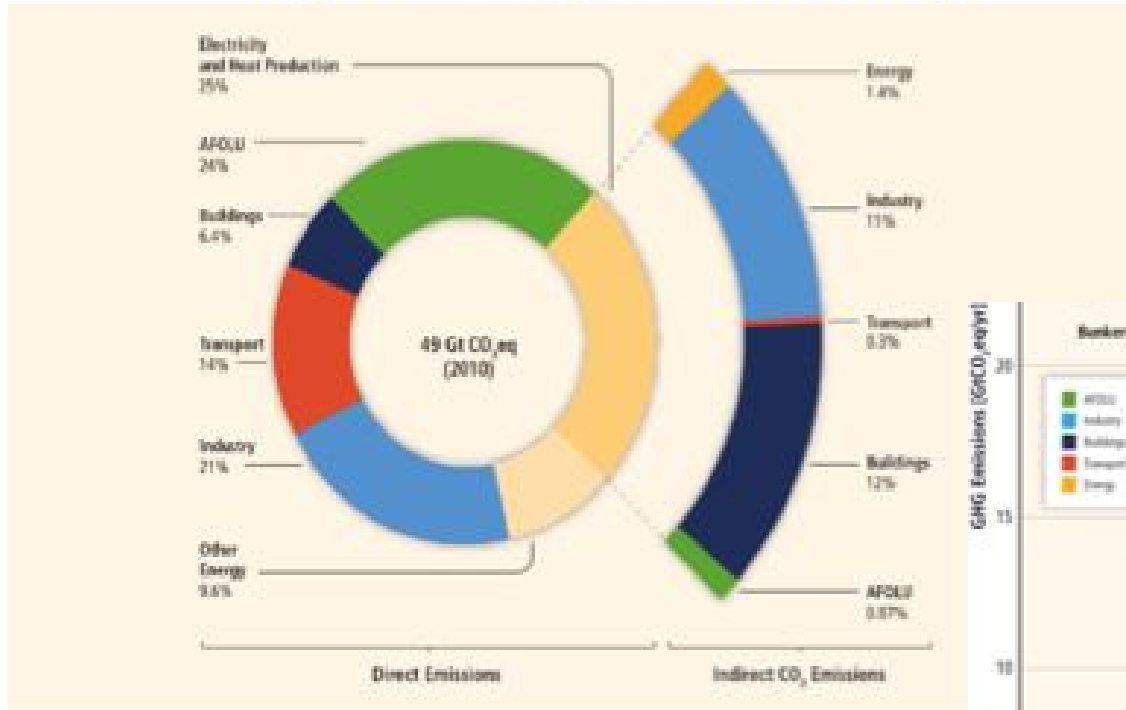
- **Global goal of keeping warming between 2° and 1.5° C (Art. 2)**
- **Quota Emission to atmosphere (Carbon Budget)**
 - 2° C ~ 1000-1200 Gt CO₂e (within 20-24 year)
 - 1.5 °C ~ 500-600 Gt CO₂e (within 10-12 year)
- **Global peaking “as soon as possible” (Art. 4.1)**
- **Achieve balance of emissions and sinks by second half of century (Art. 4.1)**
- **Global stocktake on progress towards these goals every 5 years from 2023 (Art. 14.1 and 2)**



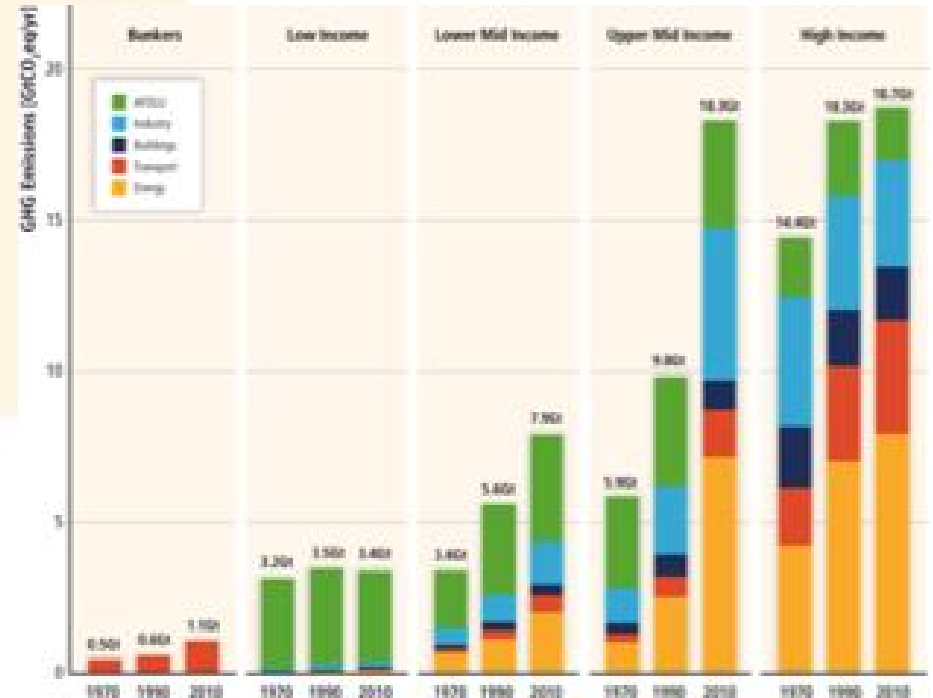
Sandford et al . 2014

NEW FINDINGS of AR5:

**AFOLU represents 20-24% of total emissions.
Globally the largest emitting sector after energy...**



**...and even more important
in developing countries**



IPCC (2013)

Emission from FOLU in 2010

"The world's forests provide many important benefits: Home to more than half of all species living on land, forests also help slow global warming by storing and sequestering carbon. Forests are sources of wood products. They help regulate local and regional rainfall. And forests are crucial sources of food, medicine, clean drinking water, and immense recreational, aesthetic, and spiritual benefits for millions of people"

www.rainforestcoalition.org

**South America:
1.27 Gt CO₂e)**

**China:
-0.39 GtCO₂e**

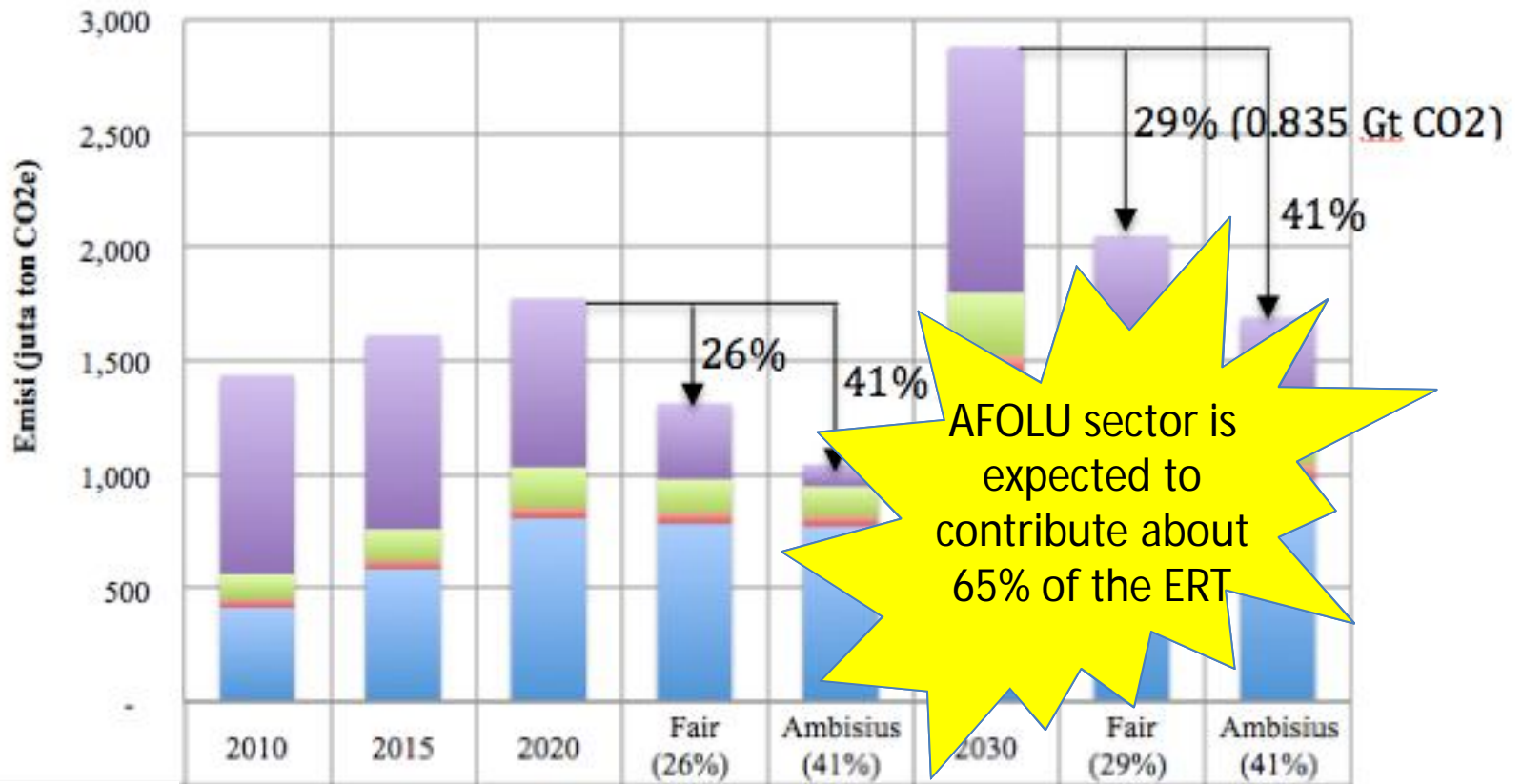
**Southeast Asia
1.16 Gt CO₂e)**

In 2005 AFOLU contributed 22% of global emission (IPCC). By 2050, without greater efforts to mitigate it, the contribution increase to 30% (FAO).

2010

World Total: 2488 MtCO₂e

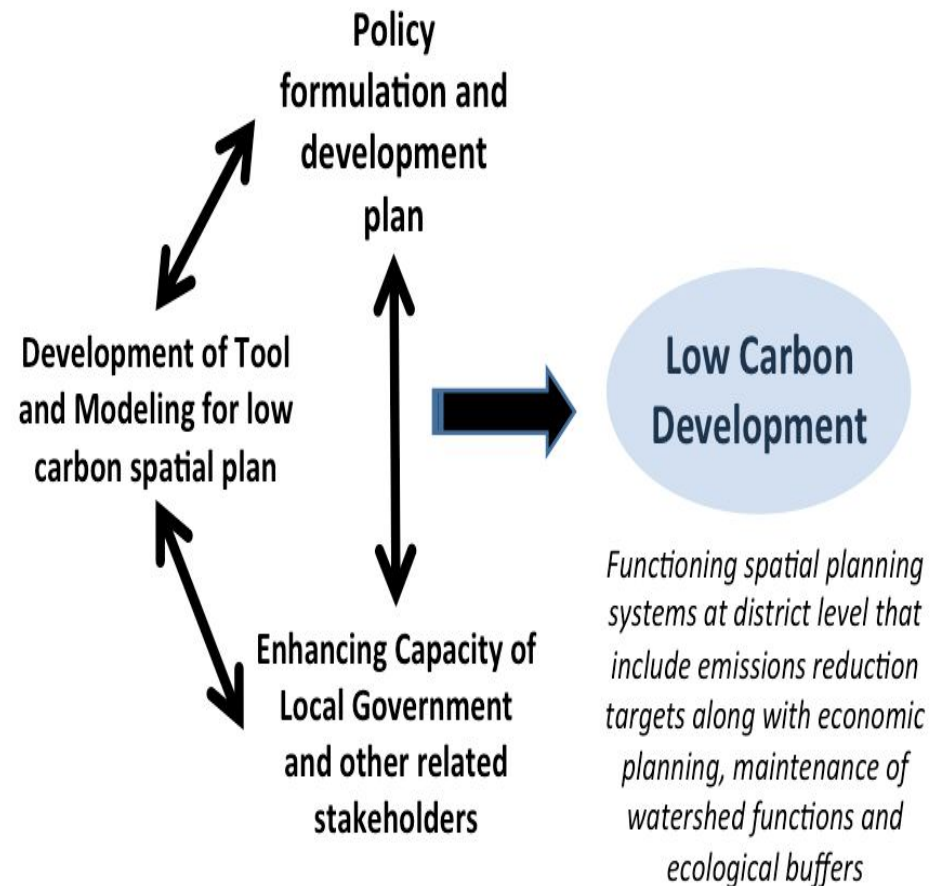
Indonesian Emission Reduction Target 2020 and 2030 (Bappenas, 2015)



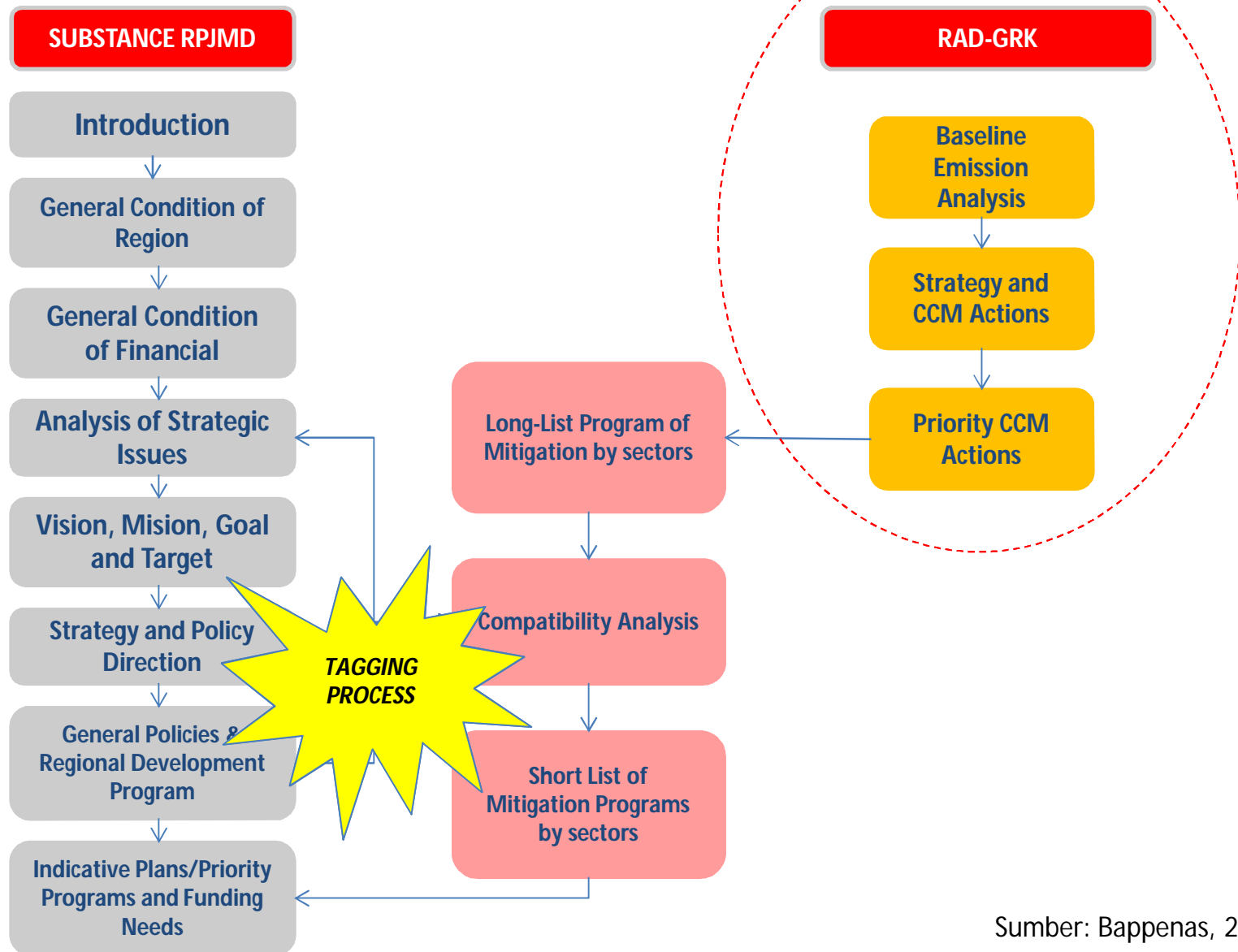
	2010	2015	2020	Fair (26%)	Ambisius (41%)	2030	Fair (29%)	Ambisius (41%)
AFOLU (incl. peat)	875	855	738	330	97	1,084	539	418
Waste	108	133	178	149	130	275	244	227
Industry	38	38	48	48	45	79	76	73
Energy & Trans	415	586	806	783	772	1,444	1,191	972

Integrating Land-Base Mitigation Actions into Development Plan: Indonesian Case

- Focus of sectoral program is to address development issues
- Program/Actions for reducing emission are not priority for local governments
- Increase understanding that doing mitigation action and programs also address the development issues (addressing climate change is addressing development issues)
- Availability of tool to assist the local government in integrating CCM into medium and long term development programs (RPJMN)

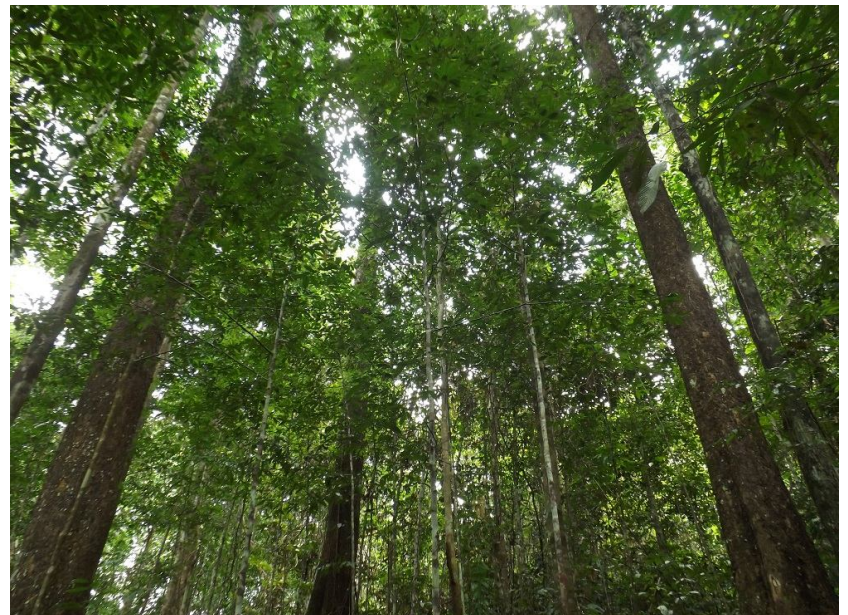


Integration Process of Mitigation Action Plans into Regional Medium-Long Term Development Plan (RPJMD)



Four Key Steps for Mainstreaming Climate Change Mitigation into Local Development Plan

1. Identification of Programs (*Tagging*)
2. Analysis of historical and Future Emission – Mapping emission risk & priority locations
3. Gap Analysis for Program Enhancement, and establish synchronization & Synergy of Programs within and across sectors
4. Setting mechanisms for coordination on programs synergy, synchronization and integration and MRV

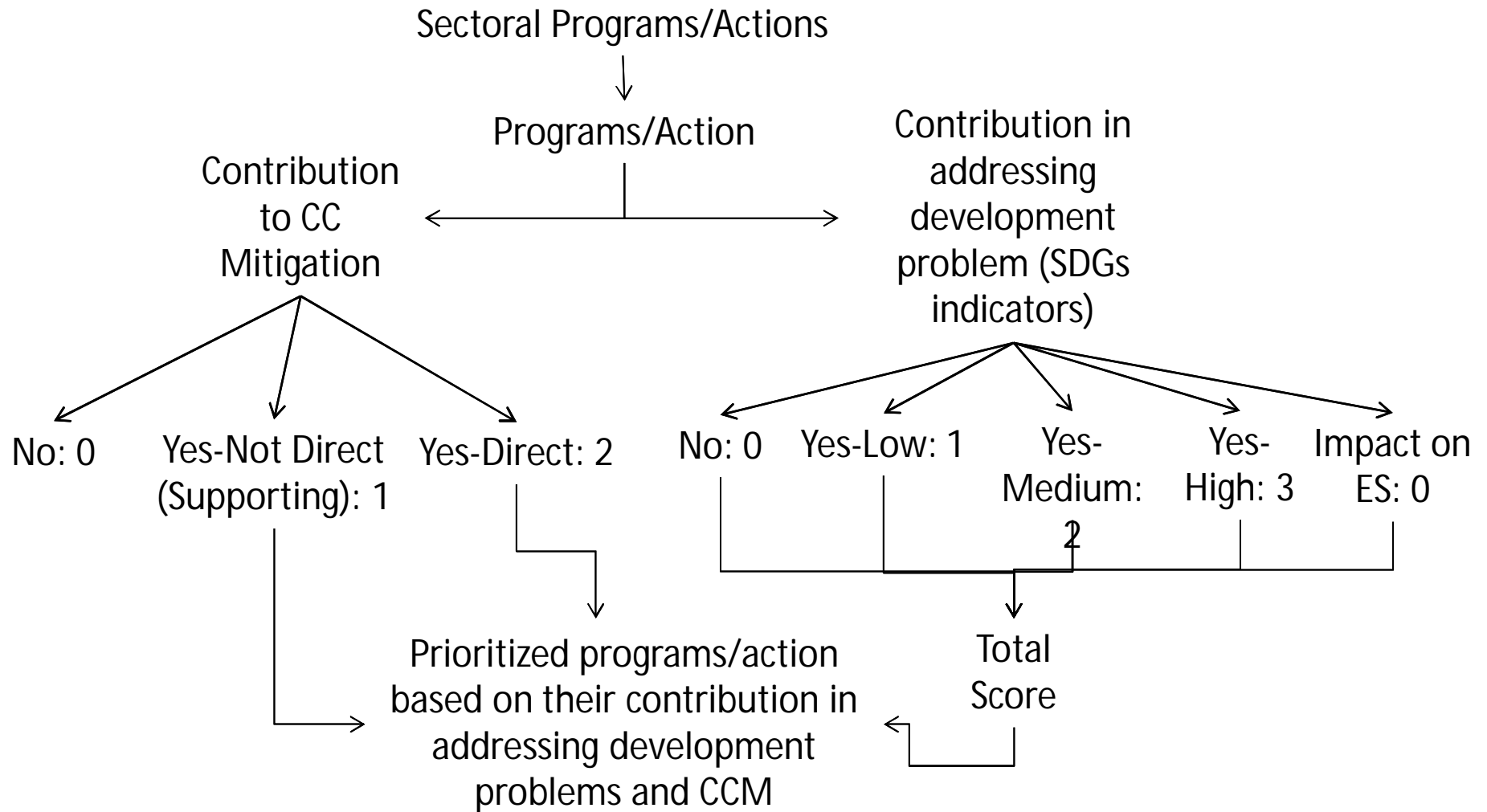


1: Identification of Programs (*Tagging*)

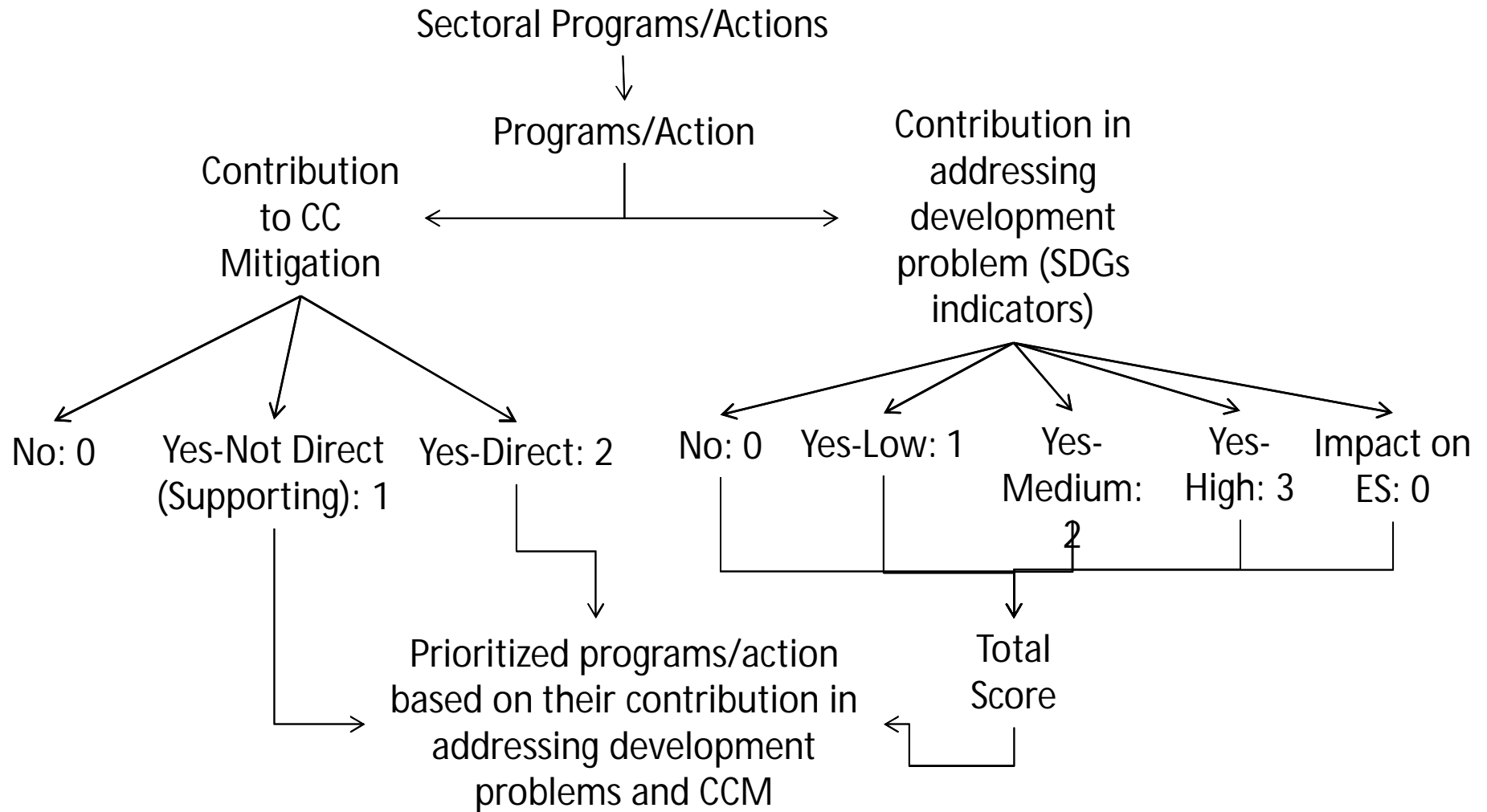
- Assisting local governments
 - to better understand programs that will contribute to address not only development problems but also to climate change mitigation (CCM) and other environmental services (ES)
 - To evaluate their programs in term of their contribution in addressing development issues (poverty alleviation, livelihood, education, governance, infrastructure, health, etc) and climate change mitigation (deforestation, forest degradation etc.) and environmental services



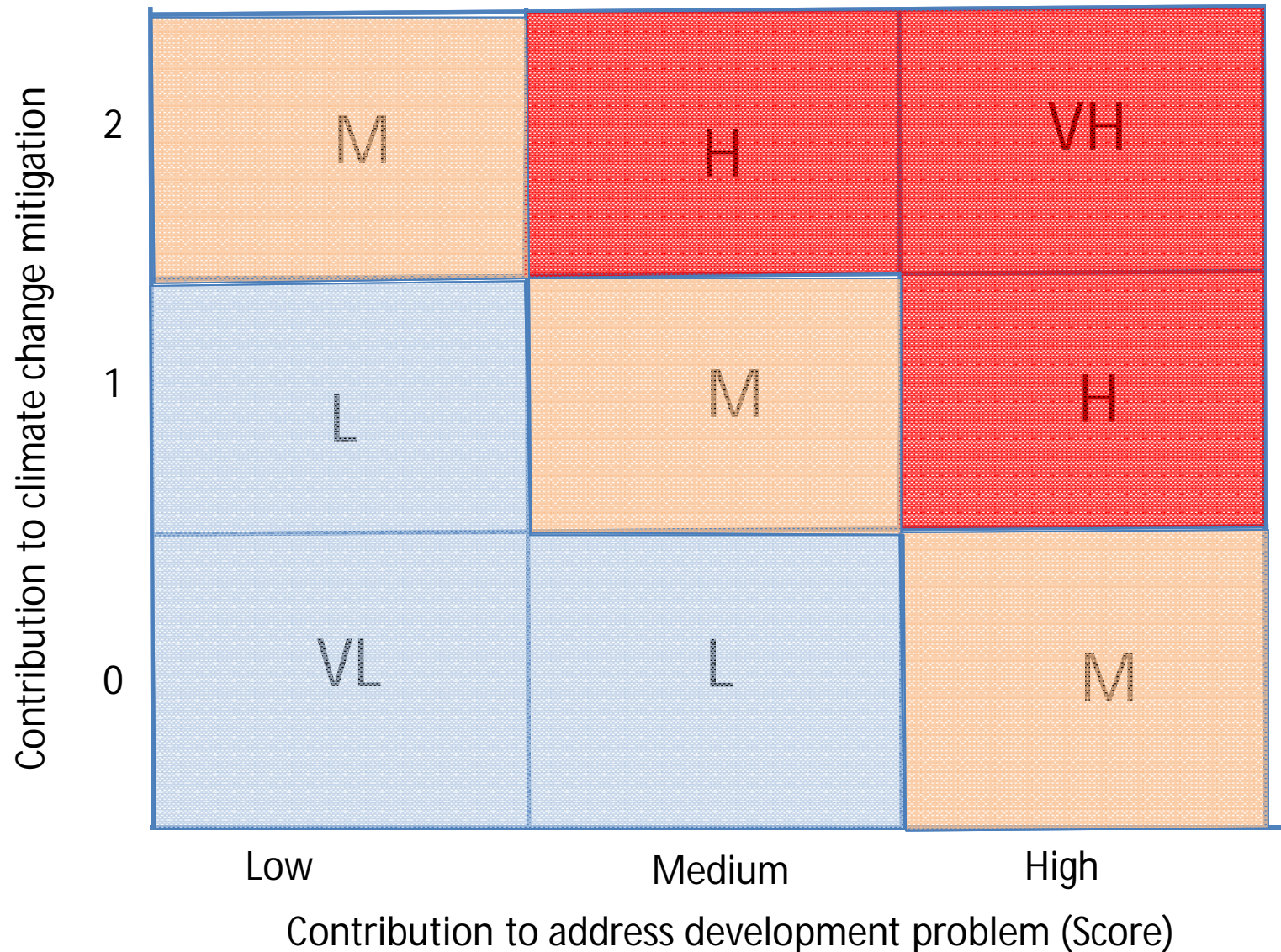
Process for identifying programs and action and their contributions to address development problem and climate change mitigation and environmental services



Process for identifying programs and action and their contributions to address development problem and climate change mitigation and environmental services



Categorizing Program/Activities of Sector in term of their contribution in addressing development problem and reducing GHG emissions



2: Analysis of historical and Future Emission – Mapping emission risk & priority locations

- Facilitating local governments to analyze historical and future emission trend and to understand drivers of emissions using tool.
- This process produces information on hot spot (*high emission risk*) area
- Two steps of analysis include
 - Assessing historical emission risk
 - Identifying hot spot areas (prioritizing locations for CCM) by evaluating future emission



Tool help to analyze spatially the historical emission (at planning unit, villages, sub-districts etc.)

Historical Emission

Planning Unit	Villages	'90-'00	'00-'05	'05-'10	'10-'14	Mean Rate	Trend
Conser- vation zone	A	60	75	100	170	100	Increase
	B	40	50	10	10	25	Decrease
Develop- ment zone	C	8	12	15	5	10	Constant
Etc	

Mapping Risk and Priority Locations

Matrix of emission risks (historical emission)-Step 1

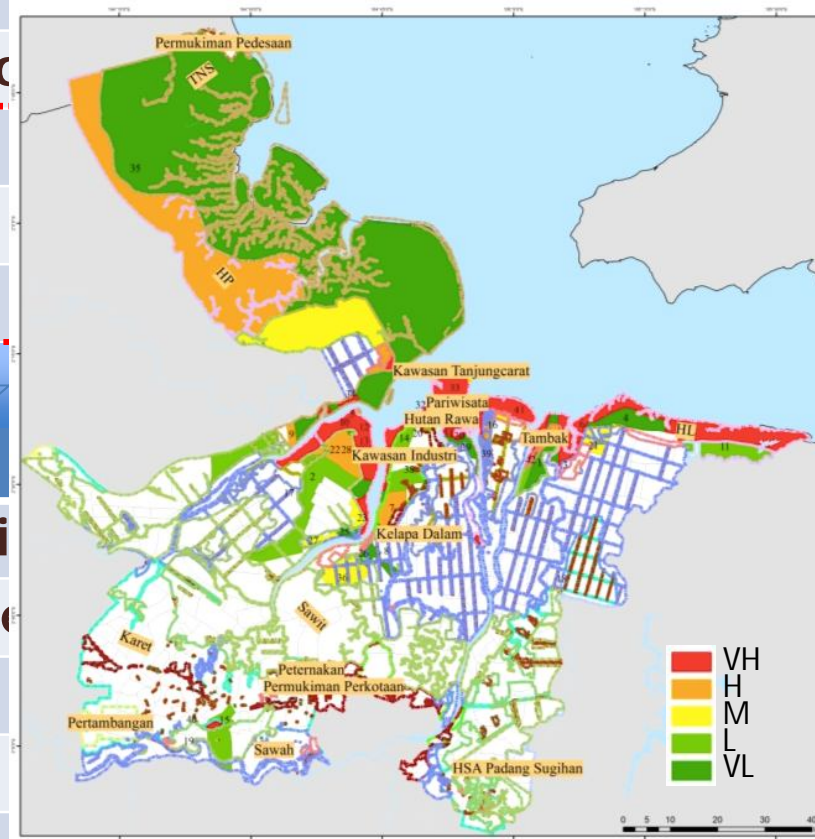
Rate	Trend	
	Increasing	Constant
High	VH (5)	
Medium	H (4)	
Low	M (3)	

Note:

Very High
High risk;
Medium
Low risk;
Very Low

Location prioritization-Step 2

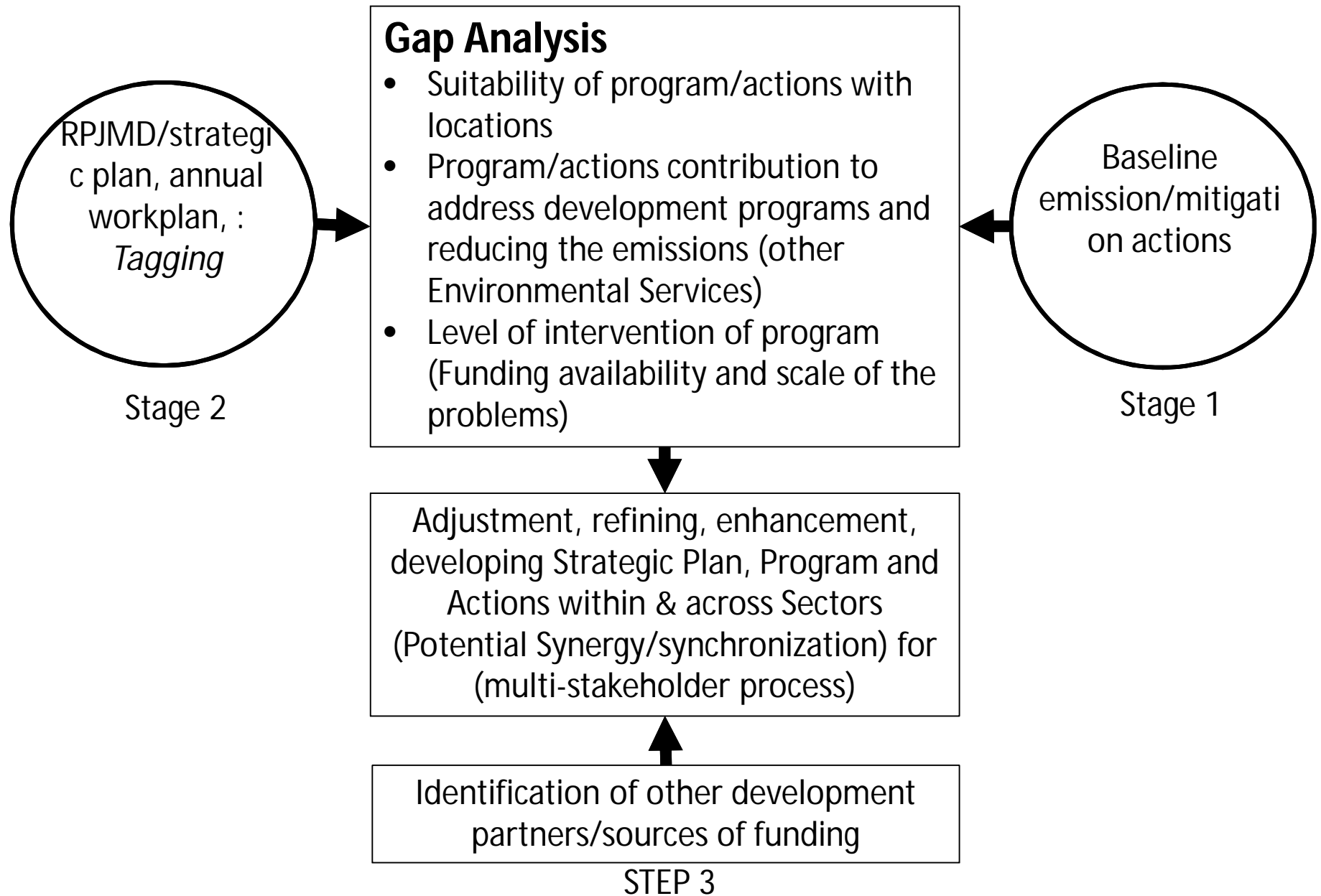
Level of risks (Historical)	Projection of emission	
	High	Medium
Very high (5)	VH	
High (4)	VH	
Medium (3)	H	
Low (2)	M	L
Very low (1)	L	VL



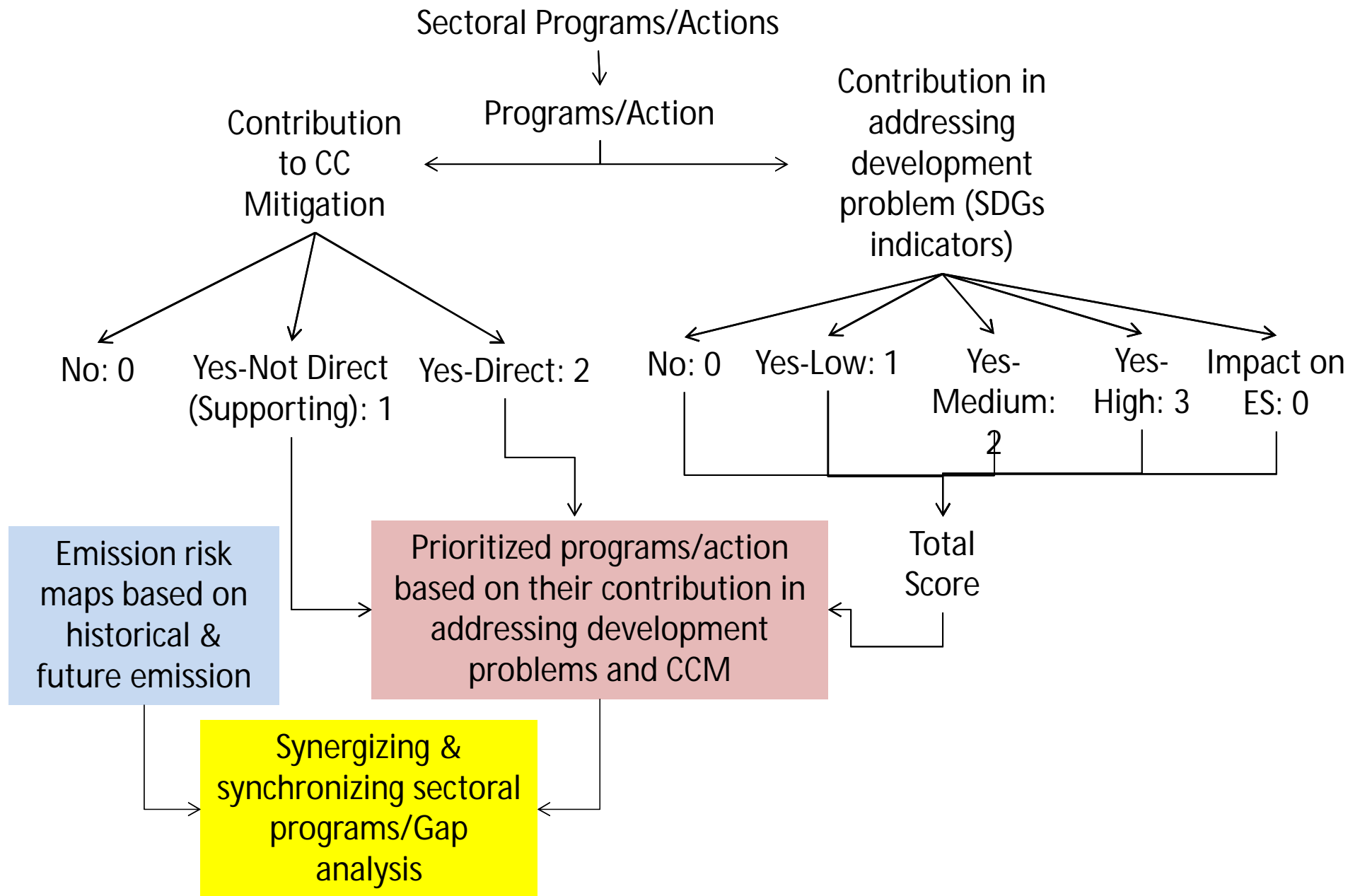
Very High
High priority;
Medium
Low priority;
Very Low
priority

- L – Low priority;
- VL – Very Low priority

3: Gap Analysis for Program Enhancement, and establish synchronization & Synergy of Programs within and across sectors

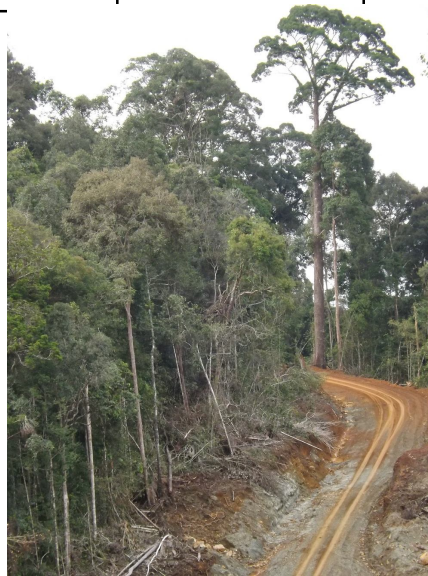


3: Gap Analysis for Program Enhancement, and establish synchronization & Synergy of Programs within and across sectors



4: Setting mechanisms for coordination on programs synergy, synchronization and integration and MRV

Planning Unit	Priority Locations	Main Program (PU)	Supporting Program (PP)	Beneficiaries	Main Agency and Supporting Agencies
Conser- vation zone	ST (1)	PU1	PP1, PP2, PP3 etc	Communities surrounding forest etc.	Agency A/Agencies B, C, D
Develop- ment zone	T (2)	PU2	PP1, PP2,	Masyarakat sekitar hutan	Agency B/Agencies A, D, F
Etc	Etc	Etc	Etc	Etc	Agency C/Private-y
...



INTEGRATION OF MER AND MRV SYSTEM

M

- Data to be monitored: Budget disbursement by mitigation action
- Actor: Ministry (RAN), Province (RAD)

E

- Data to be evaluated: result of program by mitigation action
- Actor: Ministry (RAN), Province (RAD) – Monev Division

R

- Data to be reported: Budget disbursement, result of program and indication of emission reduction
- Actor: Ministry to Bappenas (RAN), Province to Bappenas (RAD)

Presidential Regulation No.61/2011

Input to MRV process

Indication of GHG emission reduction

M

- Data to be measured: GHG emission reduction
- Actor: BLH Kota/Kab with coordination BLH Province

R

- Data to be reported:
- Actor: Province to KLH

V

- Data to be verified:
- Actor: Designated verifier

KLH Ministerial Decree No. 15/2013

Bappenas, 2015

Epilogue

- Availability of tool is very useful for assisting the local government in the process of integration of climate change mitigation into development program
 - Increasing understanding on linkage between CCM and development
 - Designing short-medium and long-term strategy for addressing development issue but also GHG emission under multi-stakeholder setting
 - Facilitating process of synergizing, synchronizing and integrating sectoral programs
 - Facilitating coordinated actions in addressing the development problems and implementing low carbon development
 - Assisting in defining funding needs toward low carbon development