Planned M&E Initiatives on Climate Change Adaptation in Indonesia

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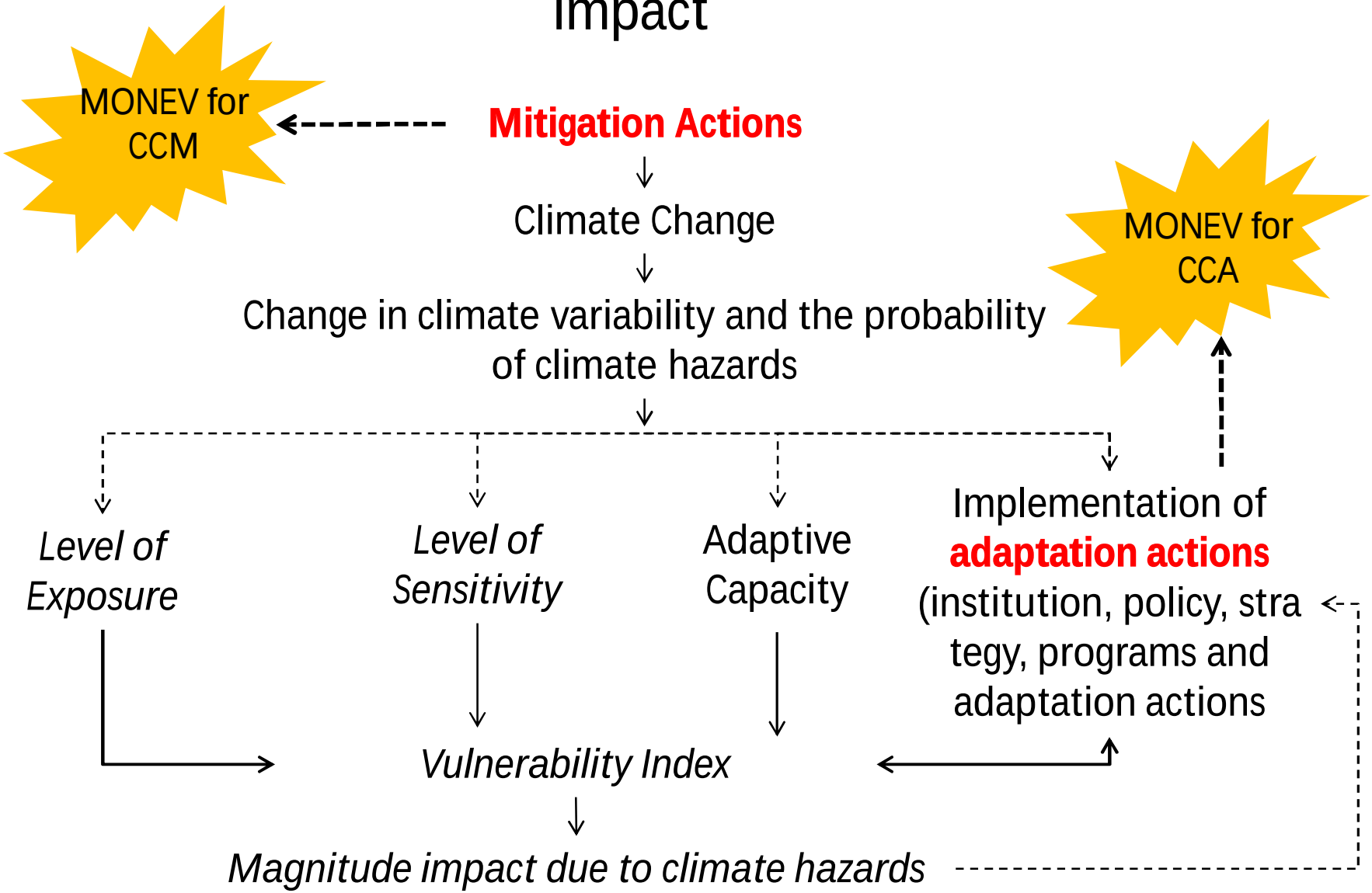
Introduction

- Government of Indonesia has developed two key documents on National Action Plan for Climate Change Adaption (CCA) and Climate Change Mitigation (CCM):
  - Adaptation: RAN API
  - Mitigation: RAN GRK and RAD GRK
- To monitor and evaluate the achievement in the implementation of the CCA and CCM actions, MoE has been mandated to develop MRV system
- MoE is now in the process of establishing the MONEV system for the CCA and CCM

Concept: Relationship between mitigation, adaptation, vulnerability and climate change impact



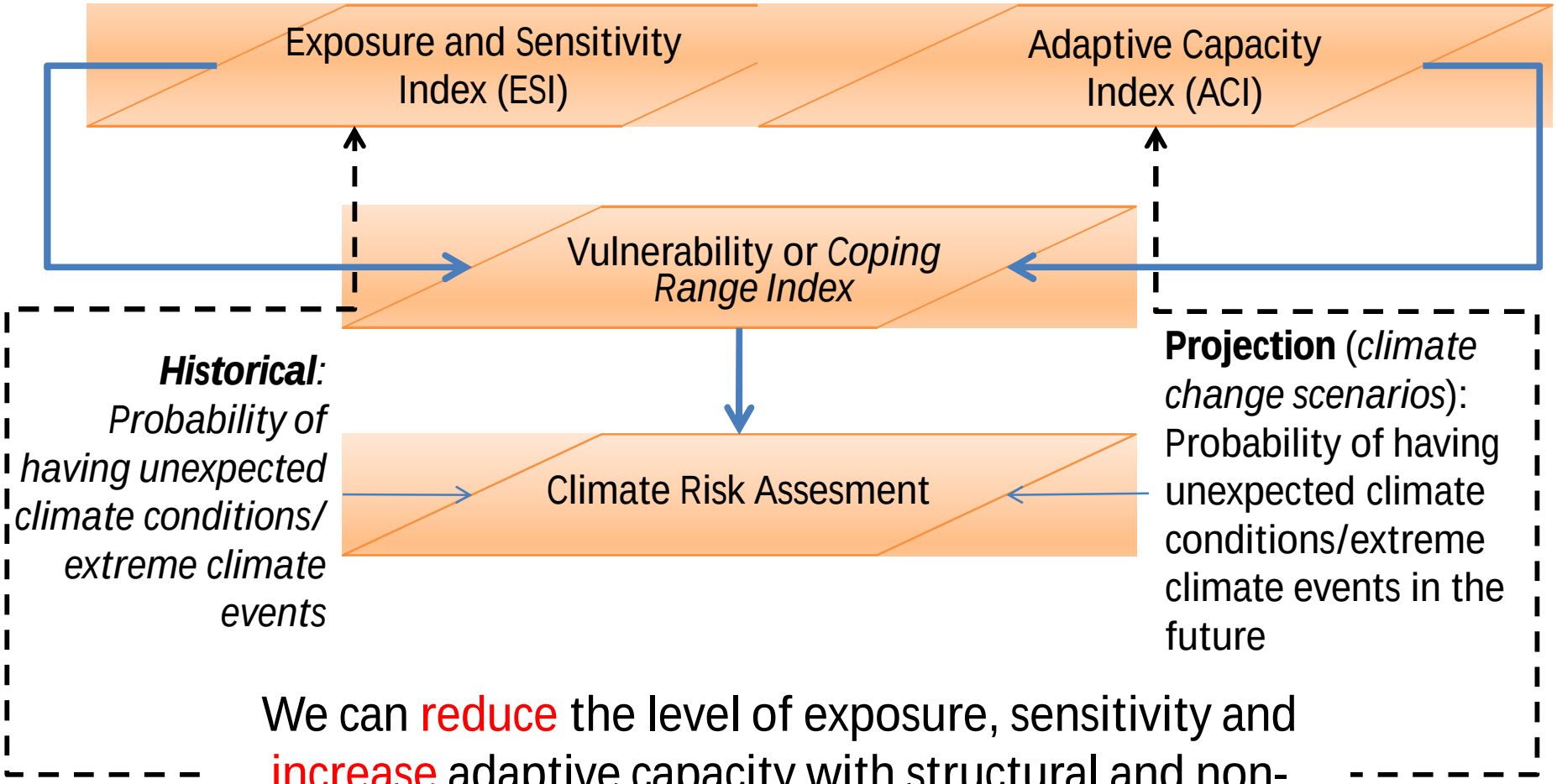
Impact of Climate Change on System is expected to be high if vulnerability of the system is high

If vulnerable system is exposed to more frequent climate hazards, the risk is increasing. *Jones et al (2004) defines*

Climate Risk = Probability of climate hazard x Vulnerability

Climate Risk Assessment

With intervention, exposure, sensitivity and adaptive capacity will change

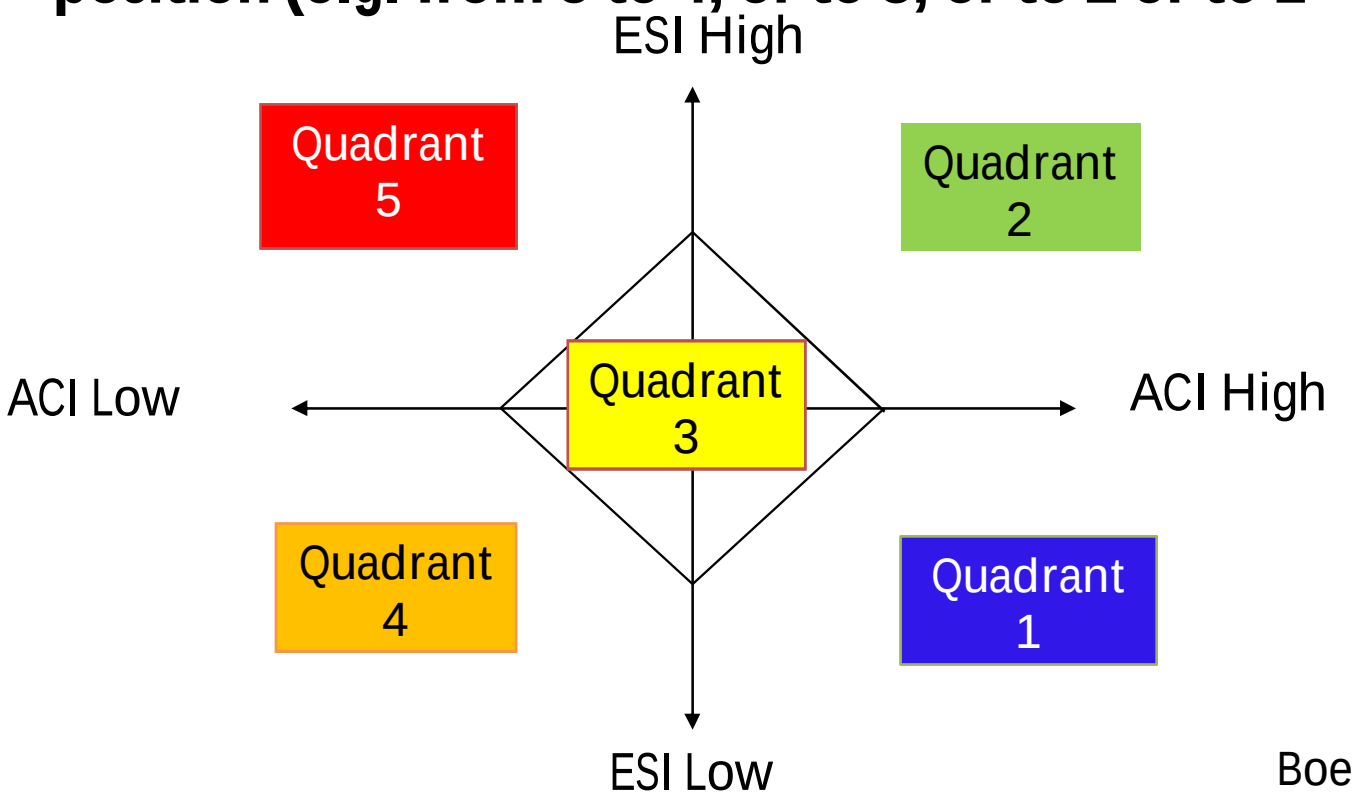


We can reduce the level of exposure, sensitivity and increase adaptive capacity with structural and non-structural interventions (**Adaptation**)

Boer et al., (2010)

Applying the Concept: Assessing Vulnerability Using Quadrant Method – Basis for MONEV System

To assess relative position of village based on vulnerability index, Indonesia applies quadrant method to locate position of a village in the quadrant based on the Exposure and Sensitivity Index (ESI) and Adaptive Capacity Index (ACI). If ESI and ACI value in Quadrant 5, we can define the village *very vulnerable*. **With CCA actions, it is expected the position of village will move to better position (e.g. from 5 to 4, or to 3, or to 2 or to 1**

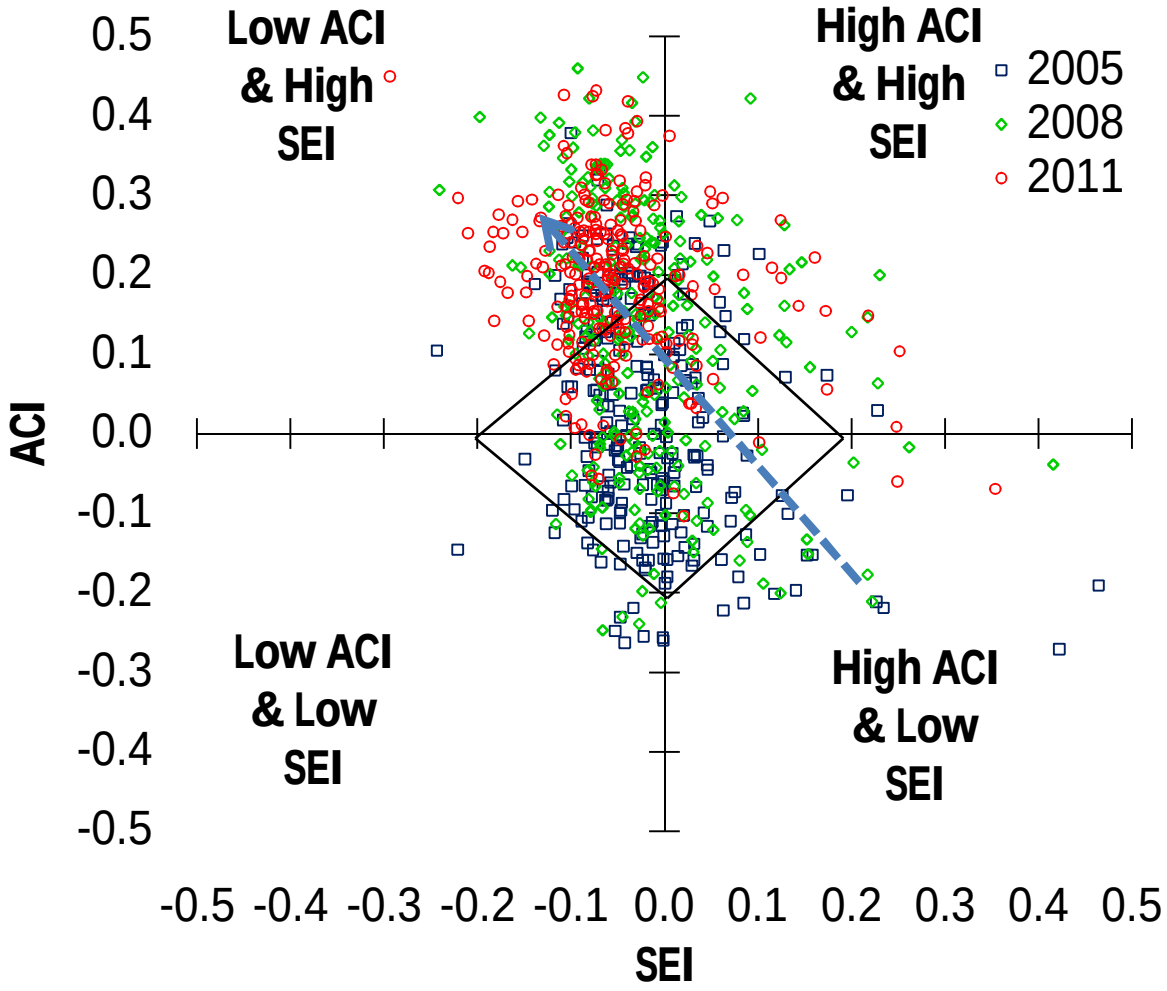


Boer et al., 2010

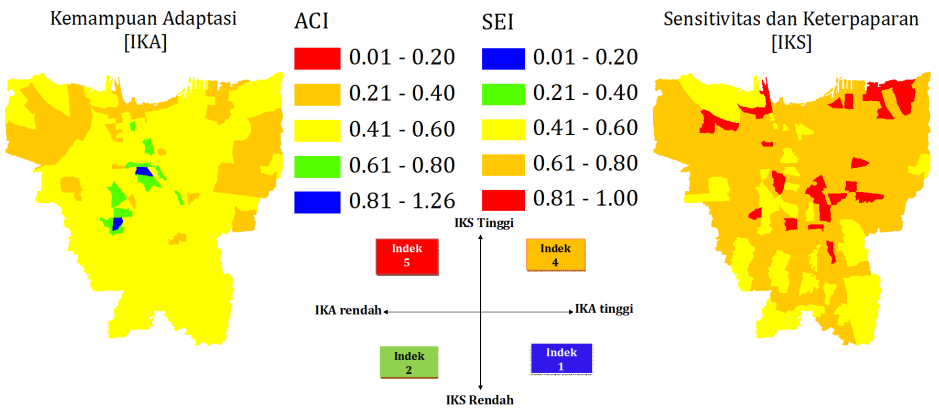
Identification of Indicators for defining Level of exposure, sensitivity and adaptive capacity of Villages: Basis for Developing MONEV of CCA

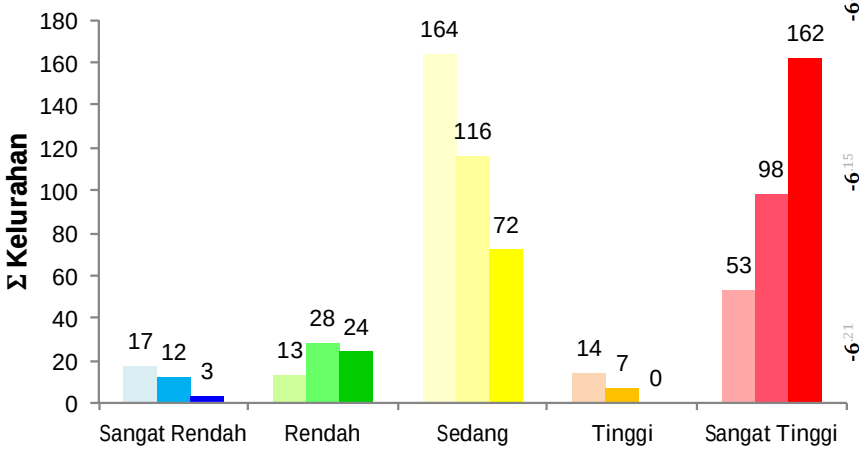
A	Indicator for adaptive capacity (ACI)	Weight	B	Indicator for sensitivity and level exposure (SEI)	Weight
A1	Electricity facility	0.10	B1	No. HH live near river side	0.05
A2	Education facility	0.45	B2	No Building near the river side	0.05
A21	TK (Kinder Garden)	0.07	B3	Source of drinking water	0.10
A22	SD (Elementary School)	0.13	B31	- Pipe (PDAM)	0.25
A23	SMP (Yunior High School)	0.20	B32	- Wells	0.50
A24	SMU (Senior High School)	0.27	B33	- Spring	0.50
A25	Universities	0.30	B34	- Lake/river	0.75
A3	Main source of income	0.10	B35	- Rainfall	1.00
A4	Health facility	0.35	B4	Population density	0.15
A41	Puskesmas	0.20	B5	Poverty Level	0.10
A42	Polyclinic	0.30	B6	Waste fraction	0.25
A43	Posyandu	0.20	B7	No HH in slump ares	0.15
A44	Midwife	0.10	B8	No building in slump area	0.05
A45	Medical doctor	0.20	B9	Land Subsidence	0.10

Applying the Concept: Assessing Vulnerability Level of Villages in Jakarta

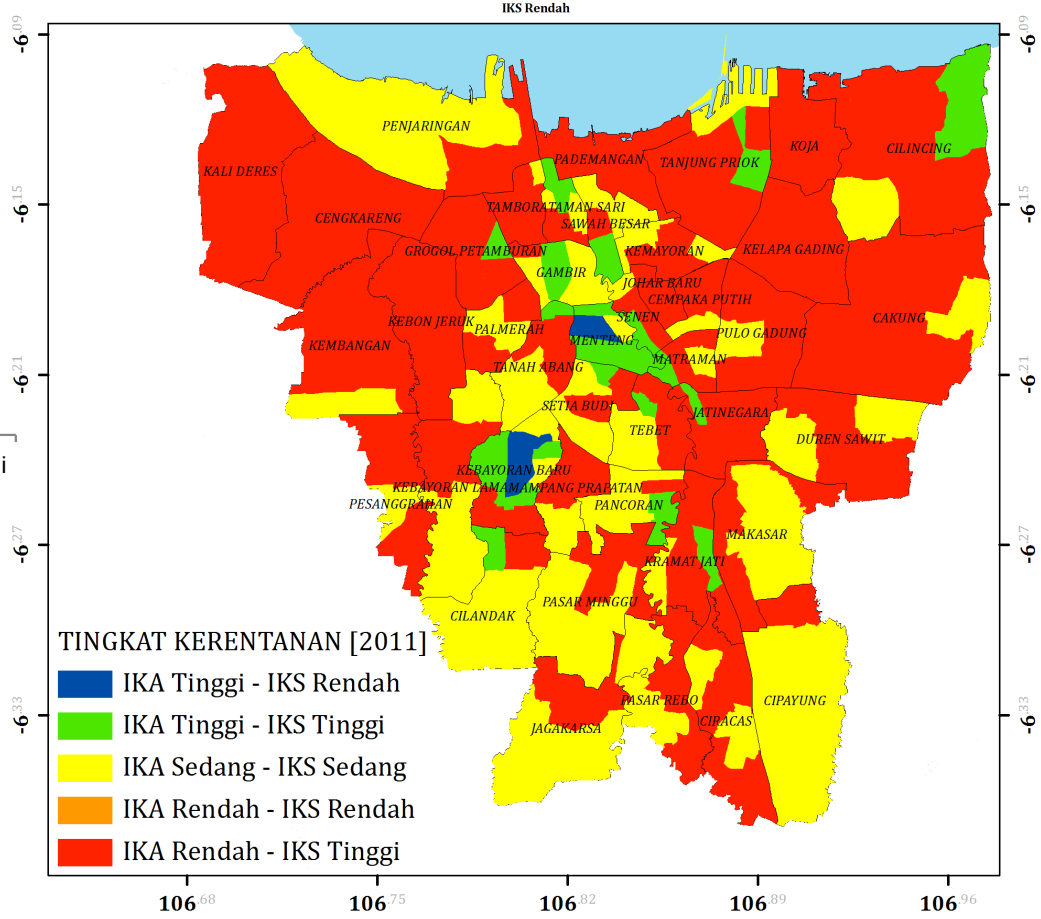


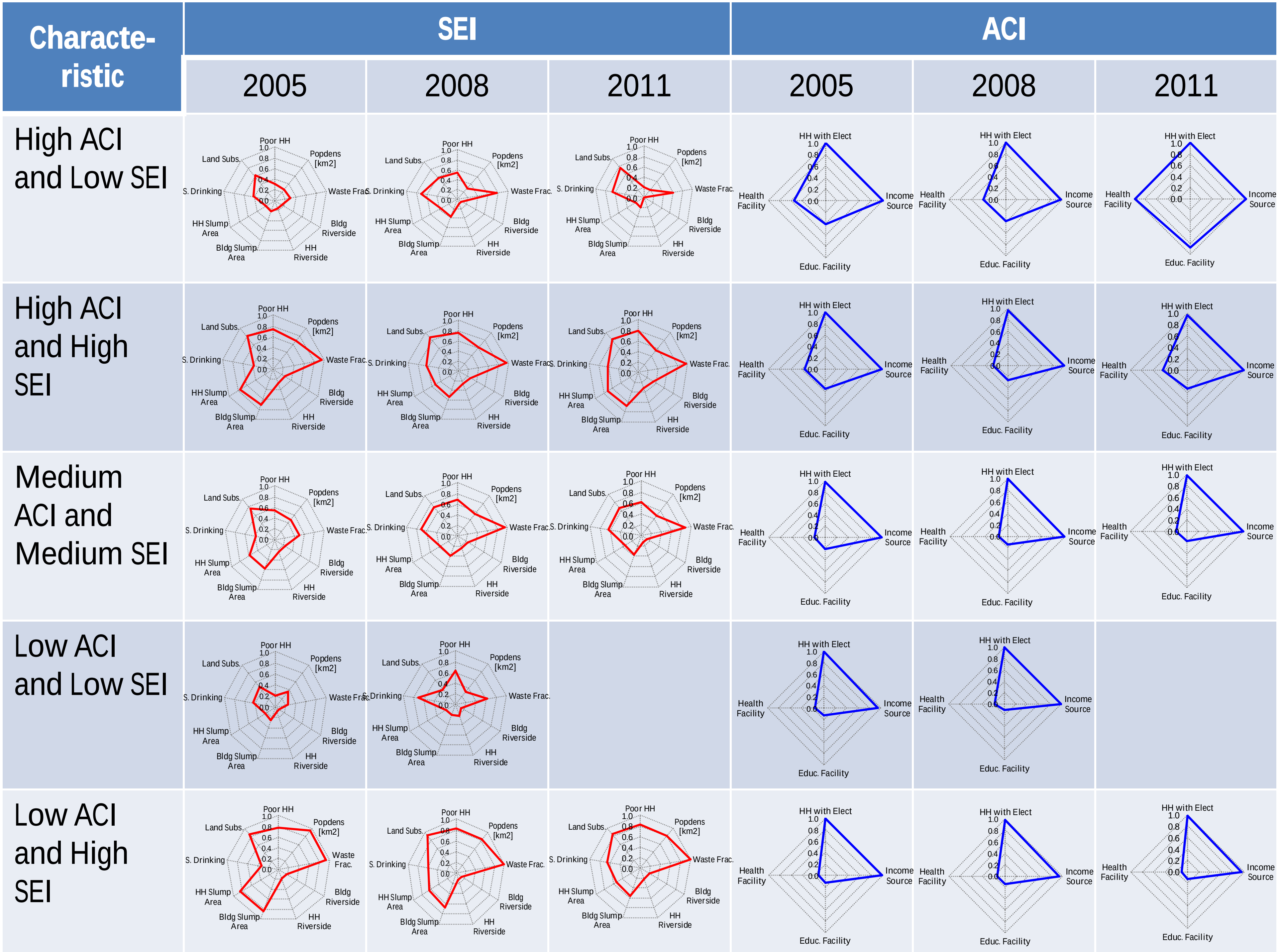
Monitor the change in Vulnerability of Village over time: Jakarta Case [Baseline 2005]



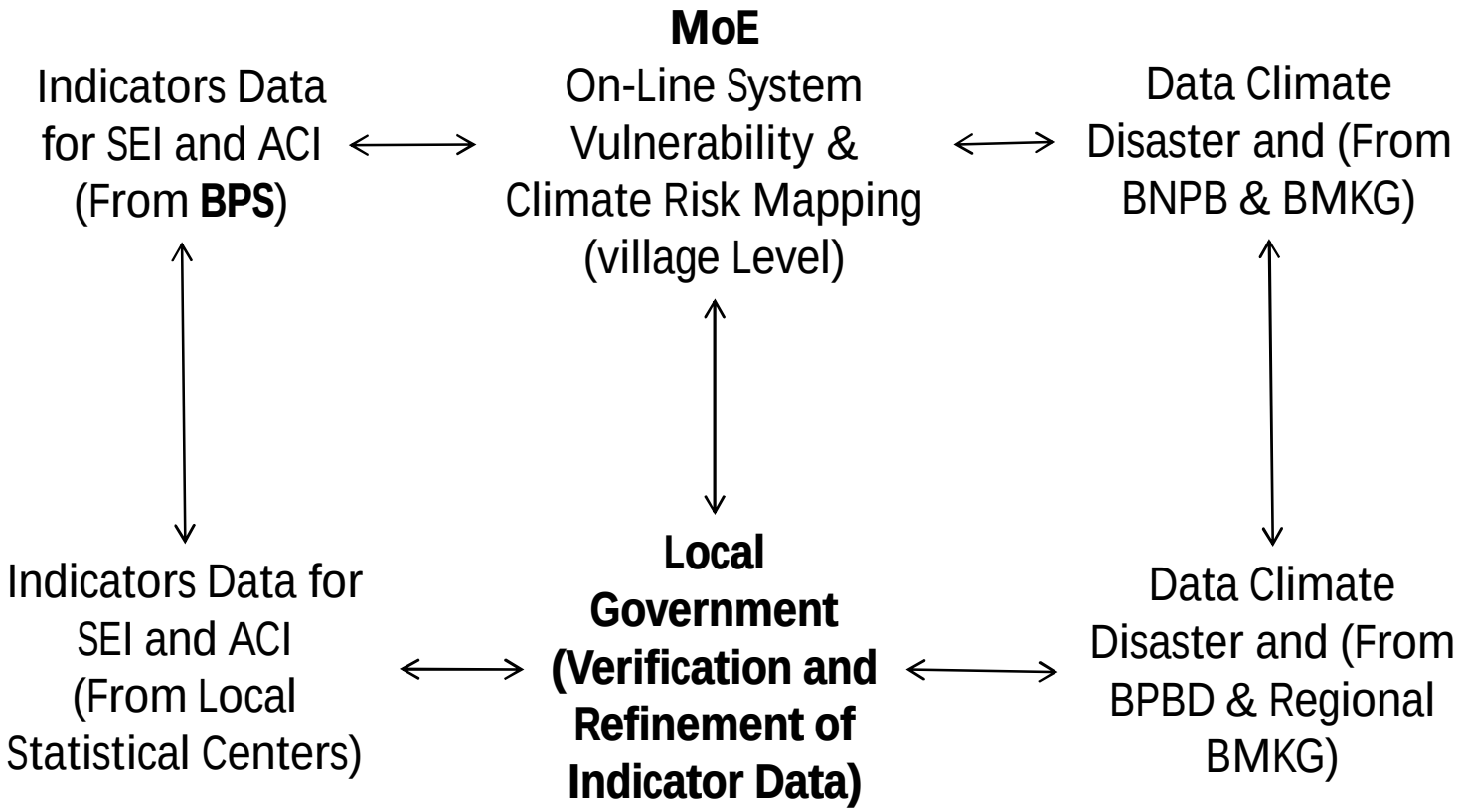


- WHERE, WHAT and WHEN the adaptation should be prioritized and synergized?
- WHAT policy supports needed?
- WHAT Institutional Arrangement?




Characte-ristic
SEI
ACI
2005
2008
2011
2005
2008
2011
High ACI and Low SEI
High ACI and High SEI
Medium ACI and Medium SEI
Low ACI and Low SEI
Low ACI and High SEI
Poor HH
Popdens [km2]
Waste Frac.
Bldg Riverside
HH Riverside
Bldg Slump Area
HH Slump Area
S. Drinking
Land Subs.
HH with Elect
Income Source
Educ. Facility
Health Facility
1.0
0.8
0.6
0.4
0.2
0.0

Institutional Arrangement for MONEV of CCA in Indonesia: On-Line System



Closing Remark

- **The tools would be able to assist the countries in**
  - Knowing relative position of village in term of its vulnerability to climate change
  - Understanding main drivers causing vulnerability– basis for prioritizing CCA (**where** and **what**)
  - Evaluating effectiveness of adaptation actions in reducing the vulnerability
  - Understanding factors that may inhibit effectiveness of adaptation actions
  - Identifying commonalities across regions on factors causing vulnerabilities
  - Defining key policies and strategies to support region in reducing vulnerability or increasing climate resilience.

Thank you