

International Urban Cooperation Asia

Component 2: Final Workshop in Indonesia

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C2 - RESULT: KEY CATEGORIES

Source Categories	Denpasar 2018	Malang 2019	Palembang 2019	Depok 2019	Makasar 2019
Transportation	57.82%	35.4%	27.46%	62.55%	49.24%
Energy in commercials					3.86%
Energy in residentials	7.66%	25.0%		16.33%	7.96%
Domestic Solid waste		25.5%	3.76%	8.14%	11.00%
Domestic wastewater	6.23%	11.2%	4.25%	11.83%	3.52%
Electricity generation ¹	24.03%		8.74%		
Energy in Industries			5.48%		23.27%
Fuel consumption in PERTAMINA			14.96%		
Fuel consumption in PT PUSRI			26.64%		
Total Direct Emission (ton CO2)	1,284,446	531,734	3,914,540	1,893,354	1,837,606
Population	947,100	870,862	1,662,893	2,330,333	1,526,677
Emission Intensity (tCO2/cap)	1.36	0.61	2.35	0.81	1.20
Emission Intensity including indirect emission (tCO2/cap)	2.76	1.67	3.44	1.84	2.39

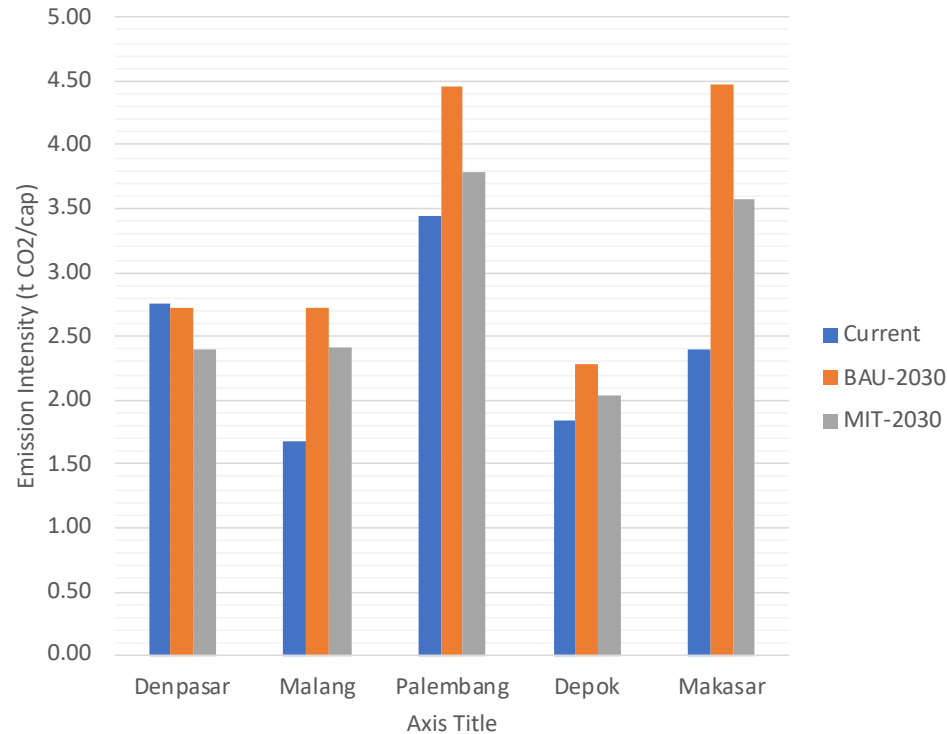
¹Denpasar: PLTDG-Pesanggaran, Palembang: PLTGU Keramasan, PLTG Jakabaring dan PLTD Sungai Juaro

C2 - RESULT: BAU & ERT

Source Categories*	Denpasar**	Malang	Palembang	Depok	Makasar**
BAU-Emission in 2030 r.t. 2018/2019	1.18	1.76	1.51	1.89	2.18
Emission Reduction Target (%)	7.50%	11.00%	15.00%	11.00%	~20.00%
Emission Intensity 2030 (ton CO2/cap)	2.40	2.42	3.78	2.03	3.58
Key Mitigation actions					
• Transportation (Avoid, shift, improve)	1.52	2.01%	4.94%	4.83%	Not defined
• Waste Management (3R, Composting, LFG, waste water treatment)	0.42	1.42%	0.71%	1.24%	Not defined
• Energy Efficiency (residential, commercial, industries)	5.56	8.14%	6.61% (+2.74%)*	4.92%	20.00%

* Including Indirect emission; **Makasar and Denpasar, COVID impact on emission projecting under the BAU has been taken into account. *** ERT by PERTAMINA and PT PUSRI

C2 - RESULT: BAU & ert



PRIORITIZED MITIGATION ACTIONS

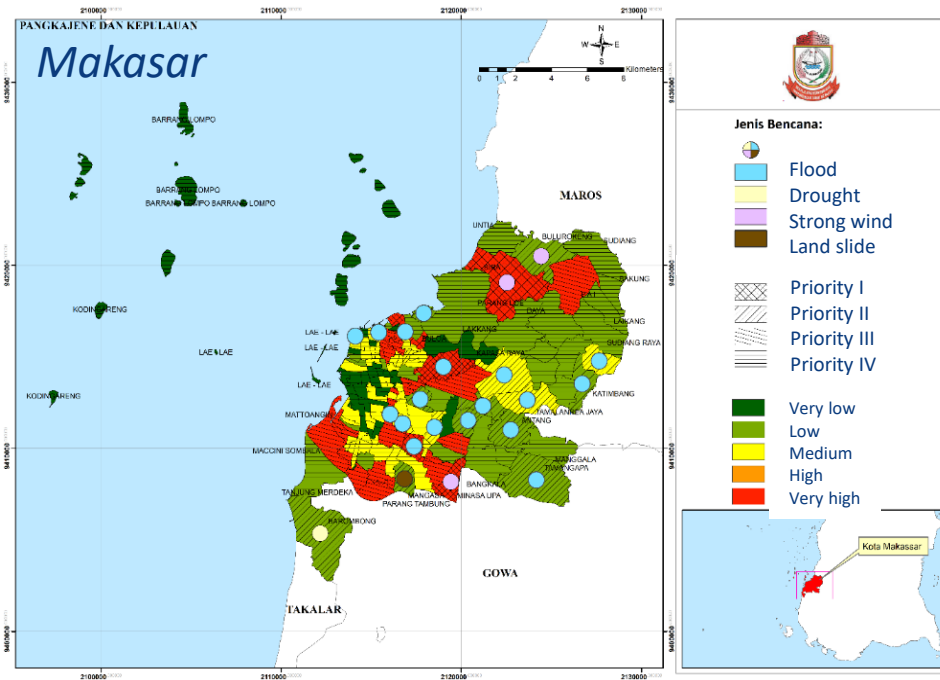
Sector	Mitigation Actions	City of				
		Denpasar	Malang	Palembang	Depok	Makasar
Energy	Energy Saving in residential area		√	√	√	√
	Energy Saving in industry		√	√		√
	Energy Saving in commercial area	√	√		√	√
	Energy Saving in goverment building	√				
	City Gas Network Development			√	√	
	Renewable Energy in residential area		√	√	√	√
	Renewable Energy in industry		√			
	Renewable Energy in commercial area	√	√			
	Earth Hour Policy		√			
Transportation	Mass Public Transportation	√	√	√	√	√
	Car Free Day	√	√		√	
	3 in 1 Policy					
	Bike and pedestrian path	√	√	√	√	√
	Park management		√	√	√	
	Automatic traffic control system (ATCS)				√	√
	Transit oriented development				√	
	Renewable Energy in transportation sector	√	√		√	√
Waste	3R (Reuse, Reduse, Recycle)	√	√	√	√	√
	Composting	√	√	√	√	√
	RDF (Refuse derived fuel)			√	√	√
	LFG (Land Fill Gass) Capture	√	√	√	√	√
	Domestic Waste Water Management	√	√	√	√	
	Industrial Waste Water Management			√	√	
	Commercial Waste Water Management	√				

C2 - RESULT: VULNERABILITY

Number of villages based on their vulnerability level (SIDIK)

Vulnerability Level	Denpasar	Malang	Palembang	Depok	Makasar
Very low	7	29	25	9	37
Low	3	0	0	3	0
Quite Low	0	0	0	2	1
Moderate	13	8	33	38	17
Quite high	9	9	32	4	69
High	1	9	12	4	29
Very high	0	2	5	3	0
Total Villages	33	57	107	63	153

C2 - RESULT: CLIMATE RISK ASESMENT



Level of urgency which depend on the state of current and future climate risk at the village (score 1:5)

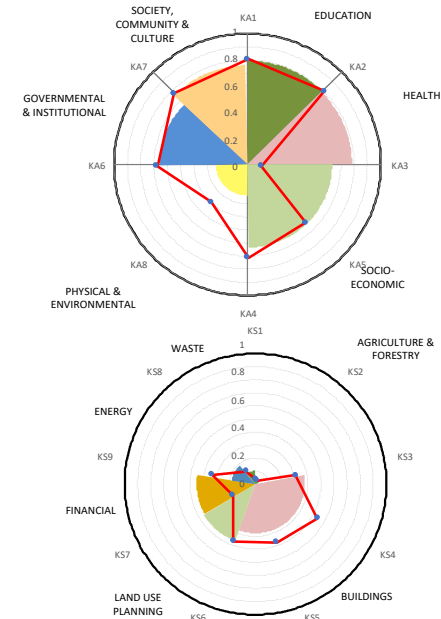
Priority location depend on the presence of climate hazards at present and level of urgency

C2 - RESULT: ADAPTATION ACTIONS

Adaptation goal: Reducing number of vulnerable villages in prioritized area (e.g. Palembang: 50% by 2030). Adaptation Actions are directed to address the drivers causing the vulnerability

Priority Actions:

1. Improvement of spatial plan (!)
2. Improving infrastructure (climate proof infrastructure)
 - Improving capacity of drainage/irrigation system
 - Waste management
 - Rainfall harvesting/water cathment
 - Restoration ecosystem (mangrove restoration, regreening)
 - Improvement health facilities
3. Community Empowerment
 - Village program: Kampung Iklim, program Kali Bersih, Desa Tangguh Bencana, Rumah sehat, etc.
 - Livelihood diversification (home industries)
 - Integration climate change into education curricula
 - Facilitation and strengthening youth group on environmental awareness
 - Food garden



IMPLEMENTATION OF CAPs

- Integration of climate actions into local development plans
- Climate change Performance Indicators (emission reduction and adaptation goal)
- Implementation of Ecosystem-based fiscal policies (climate change performance indicators)
- Participation on non-party actors - the presence of Climate Change Working Group (multi-stakeholders: Palembang, Makasar, Depok, Malang and Denpasar in still process)
- Improvement of development data collection system (key climate change related indicators)
- Financial access (implementation of environmental financial policies - PP46/2017)

C2 - OUR CHALLENGES

1

CHALLENGE

- Data sharing/collection system (lack of awareness and not part of the mandate)

2

CHALLENGE

- Staff mutation/promotion, discontinuity

3

CHALLENGE

- Monitoring impact of Climate Actions (limited technical capacity in using climate monitoring system-GCoM Template) - tend to hire consultant

4

CHALLENGE

- Limited human resources (too many tasks should be handled)

5

CHALLENGE

- Limited financial for upscaling the climate actions

C2 - LESSONS LEARNED

1

LESSON LEARNED

- Strong commitment of the City Government

2

LESSON LEARNED

- Climate actions are about dealing with development problems

3

LESSON LEARNED

- Clear mandate for sectors in the implementation of climate actions (climate change is responsibility of Environment Office)

4

LESSON LEARNED

- On-line system is quite effective for discussion and consultation but not for capacity development (training)

5

LESSON LEARNED

- Intensive communication and consultation with city governments