



Mitigation and Carbon Finance Development

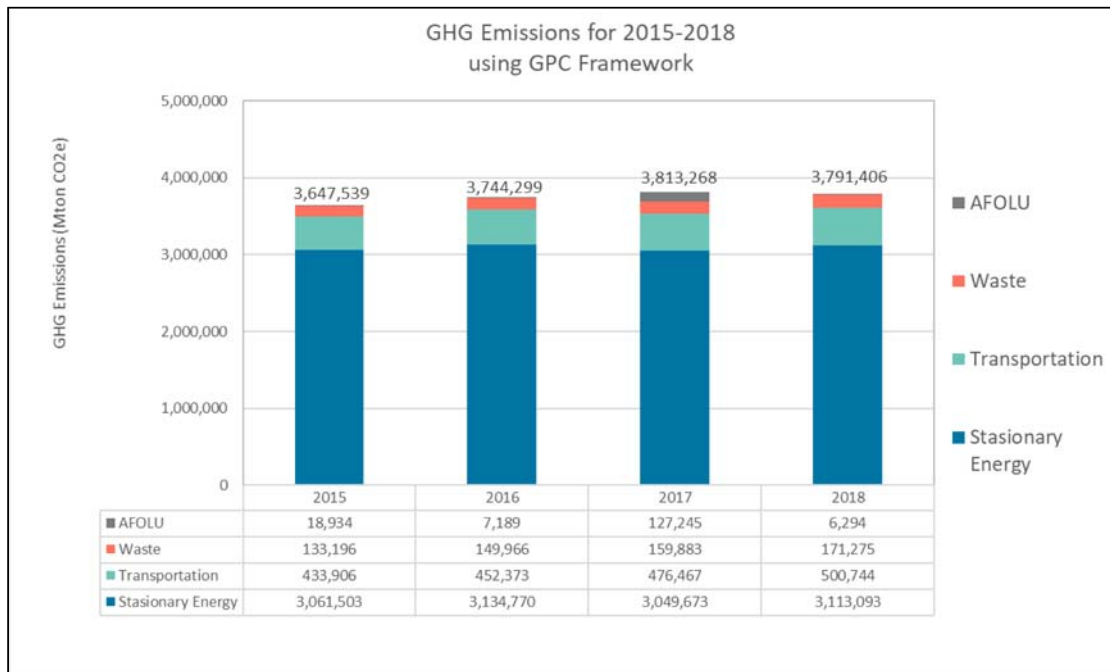
CITYNET - Climate Leadership Program

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September 23, 2020

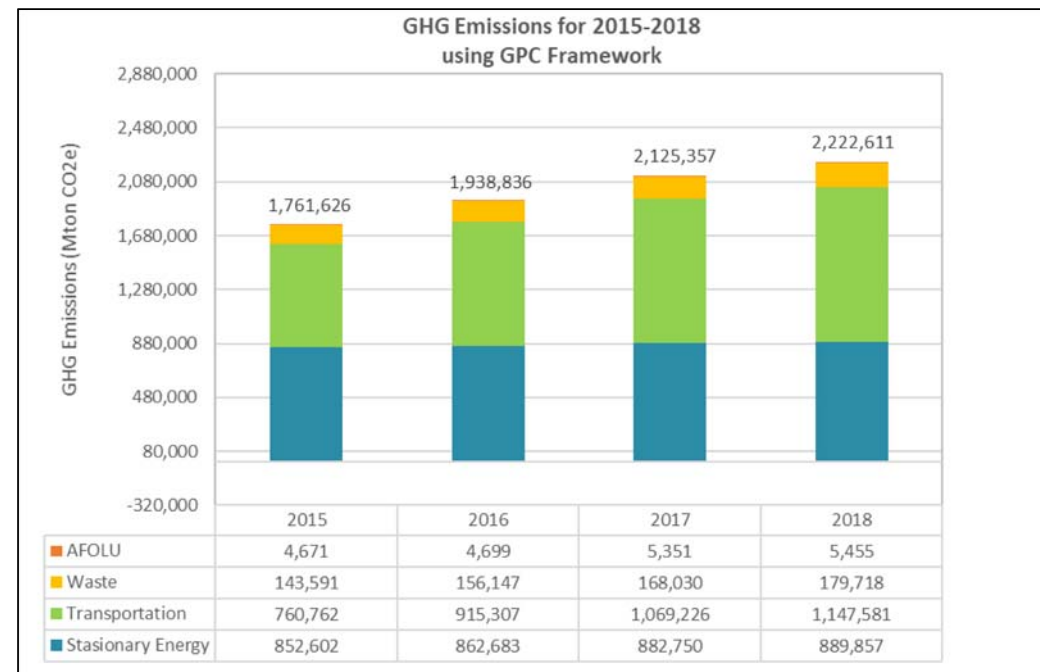
Cities and GHG emission

- Cities account for about 71% - 76% of global GHG emission and around 67% - 76% global energy consumption (WB – Low Carbon Cities)
- Main contributors: energy (transport, building), waste



Source: ICLEI

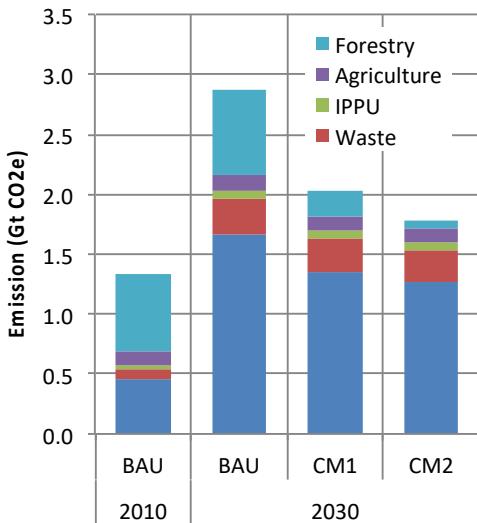
Balikpapan



Source: ICLEI

Bogor

Indonesia's NDC and role of the cities



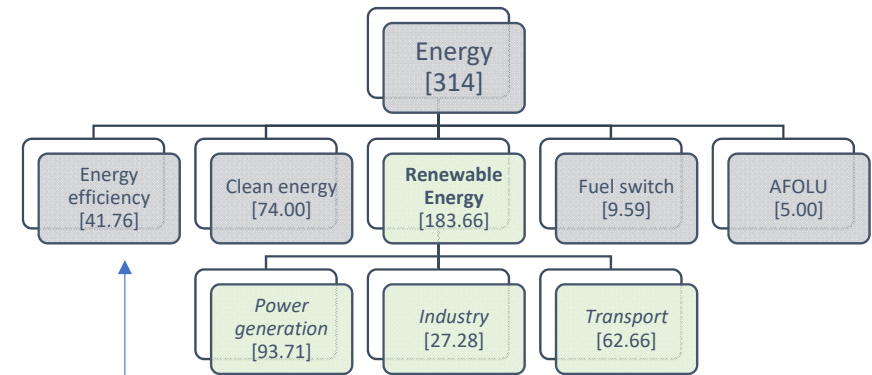
No	Sector	GHG Emission Level 2010* (Mton CO ₂ e)	GHG Emission Level 2030 (Mton CO ₂ e)			GHG Emission Reduction (Mton CO ₂ e)				Annual Average Growth BAU (2010-2030)	Average Growth 2000-2012*
			BaU	CM1	CM2	CM1	CM2	CM1	CM2		
1	Energy*	453.2	1,669	1,355	1,271	314	398	11%	14%	6.7%	4.50%
2	Waste	88	296	285	270	11	26	0.38%	1%	6.3%	4.00%
3	IPPU	36	69.6	66.85	66.35	2.75	3.25	0.10%	0.11%	3.4%	0.10%
4	Agriculture	110.5	119.66	110.39	115.86	9	4	0.32%	0.13%	0.4%	1.30%
5	Forestry**	647	714	217	64	497	650	17.2%	23%	0.5%	2.70%
TOTAL		1,334	2,869	2,034	1,787	834	1,081	29%	38%	3.9%	3.20%

* Including fugitive

**Including peat fire

Notes: CM1 = Counter Measure (unconditional mitigation scenario)

CM2 = Counter Measure (conditional mitigation scenario)



Role of cities in EE, including for transportation

Utilization of biofuel for transportation

GHG mitigation in the cities

Energy supply

- Focusing on the utilization of clean energy
 - Utility scale renewable energy
 - PV rooftop



Energy demand

- Focusing on the efficient use of energy:
 - LED/Solar PV street lighting
 - Green building
 - EV
 - Public transport

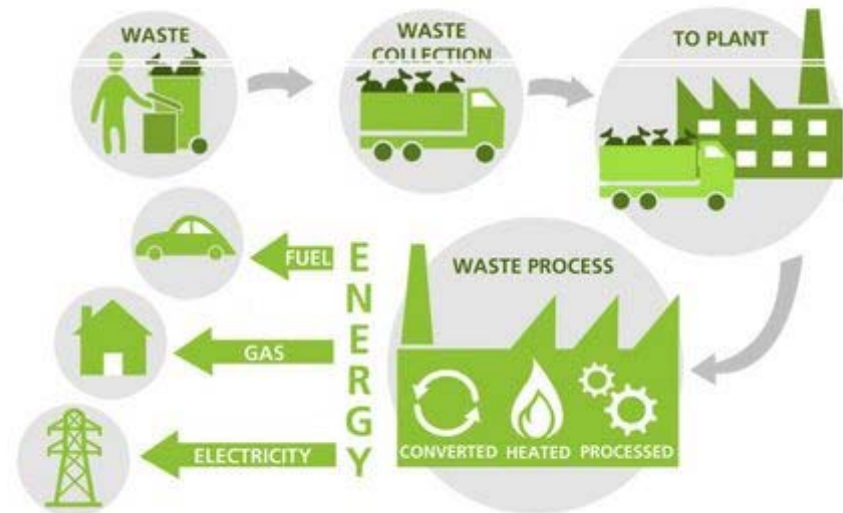


GHG mitigation in the cities

Waste management

- Reduce, reuse, recycle
- Waste treatment
 - Waste to energy
 - Compost

Why is waste to energy important?



Emission reduction potentials

- Methane capture in the solid waste management or waste water treatment facility and conversion to heat or electricity
- Industrial emission reduction
- Co-generation
- Renewable energy
- Forestry
- EV with recharging station using RE



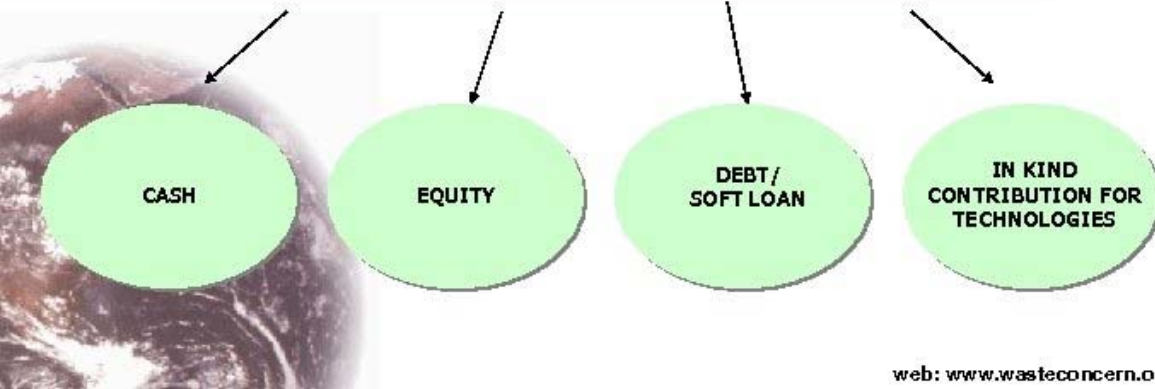
Can carbon finance provide financing for GHG mitigation in the cities?

What is Carbon Financing?

❑ **Carbon financing** can be defined as **financial resources** provided to projects generating (or expected to generate) green house gas emission reductions in the form of the purchase of such emission reductions.

❑ In simple term, *carbon finance* is a purchase contracts whereby one party pays another party in exchange for a given quantity of Green House Gas (GHG) emission reductions.

Payment made in different forms to abate GHG



web: www.wasteconcern.org

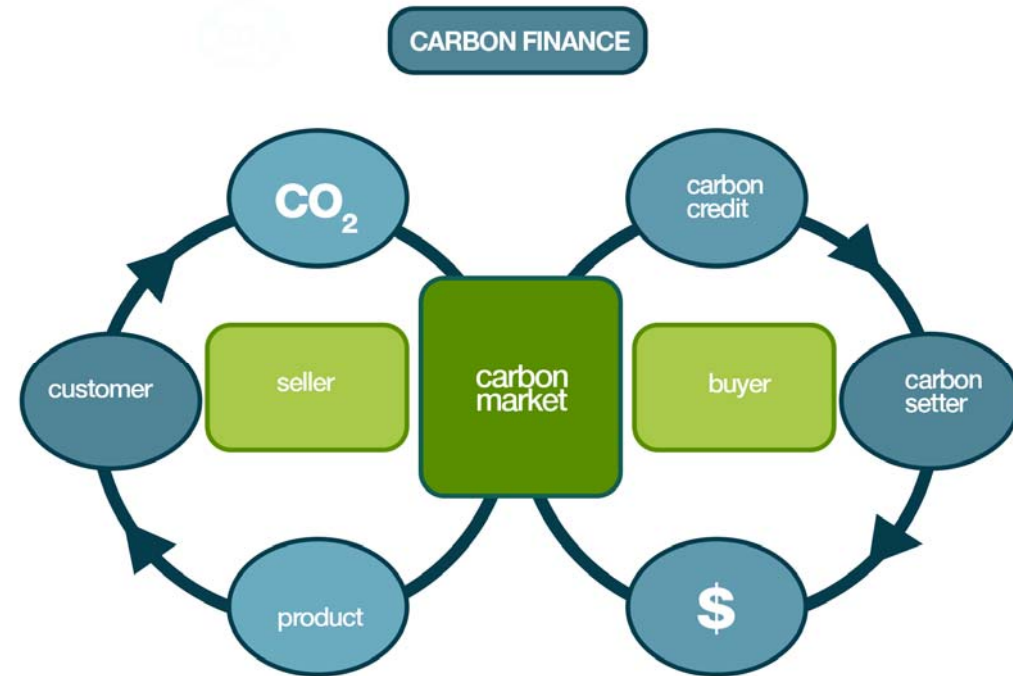
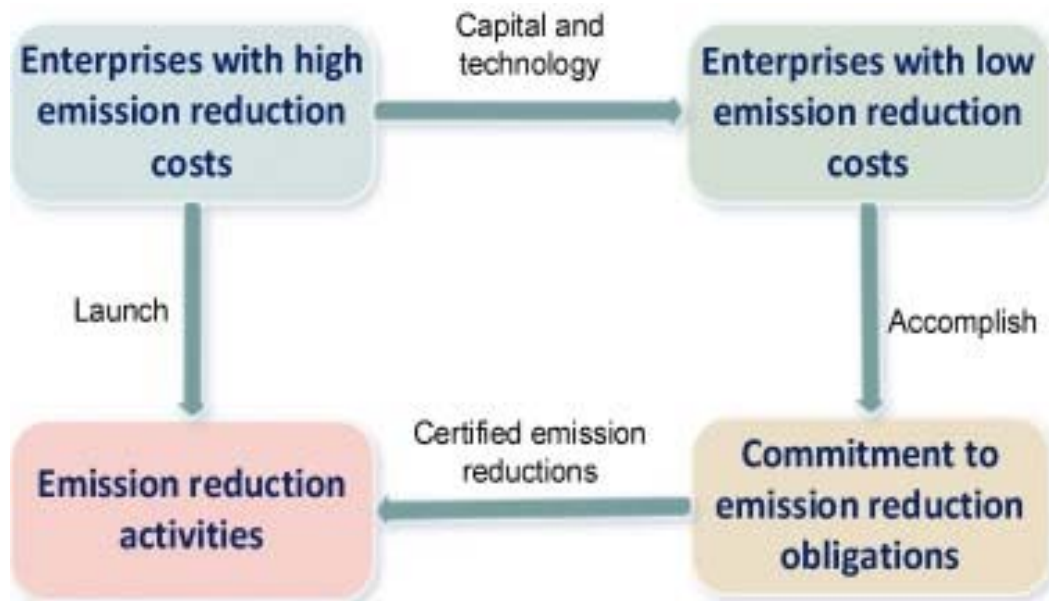


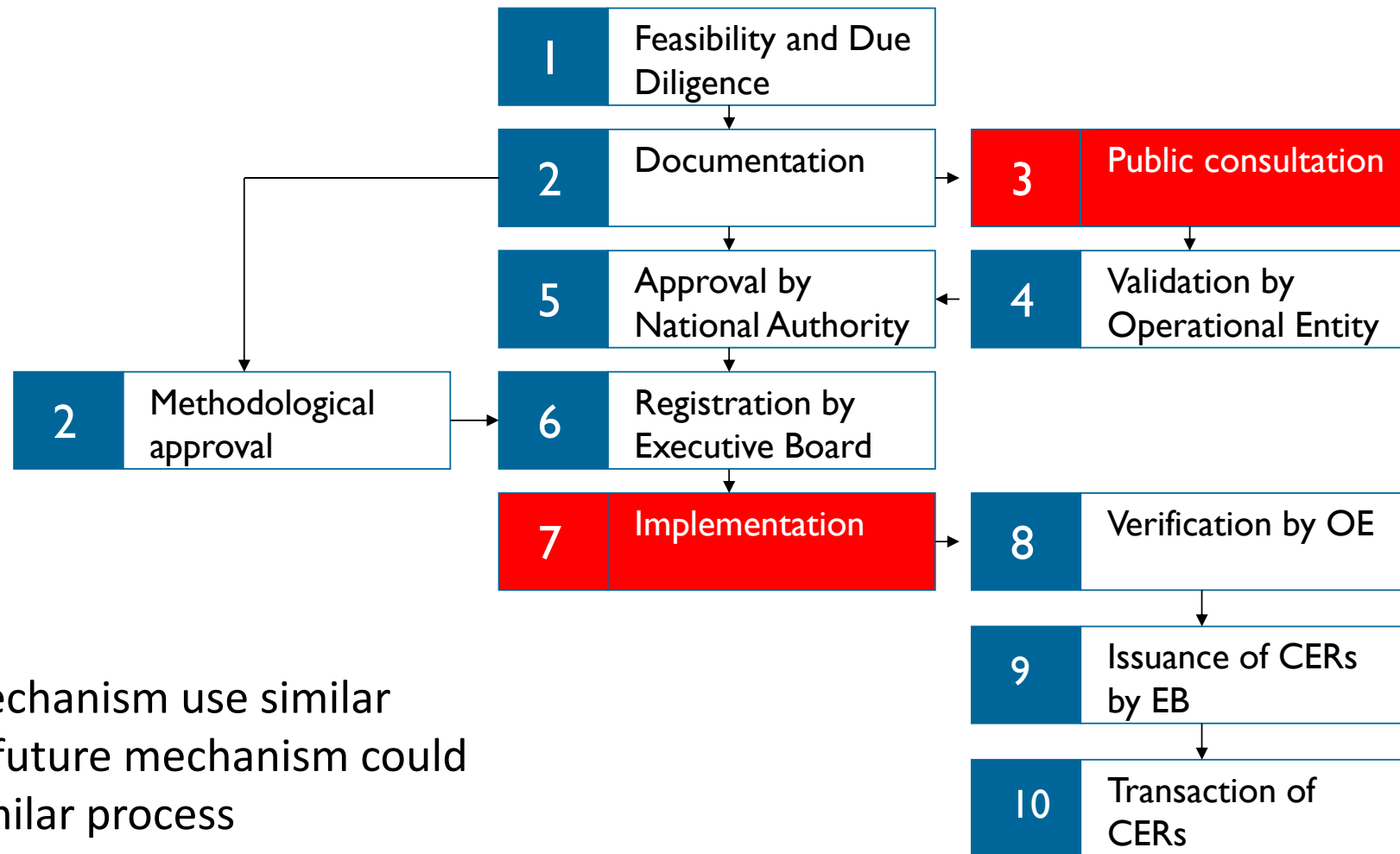
Diagram Kenneth buddha Jeans

Case: Emission reduction project in Geothermal project



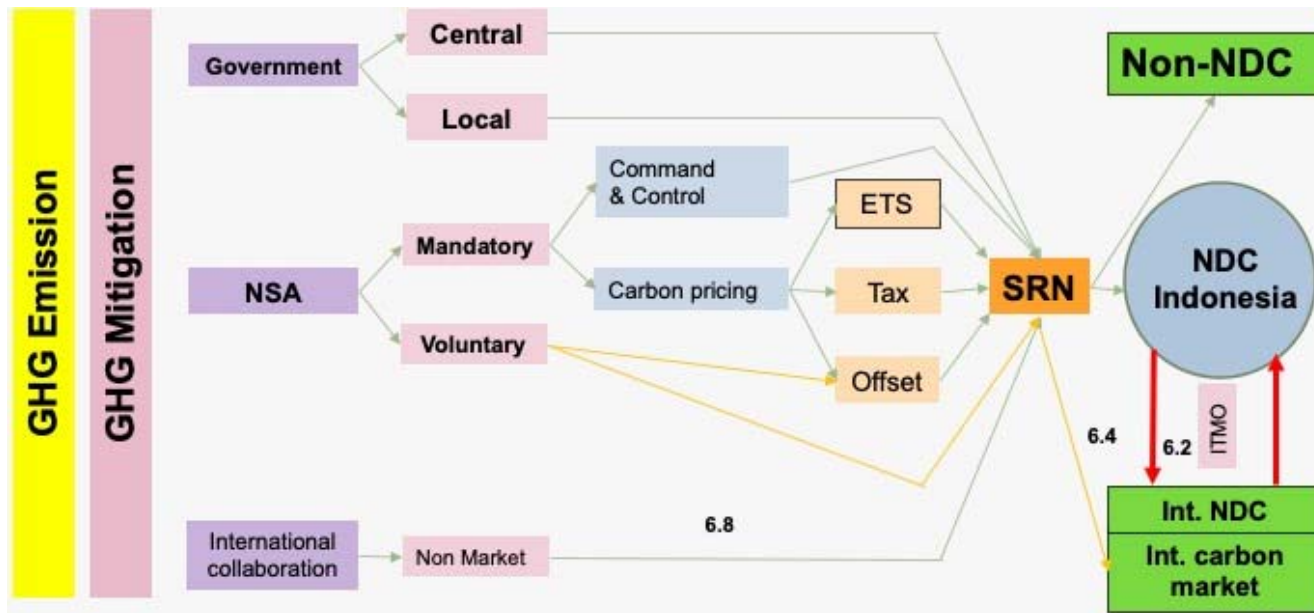
- Gunung Salak capacity upgrade project
- Project developed using VCS
- Capacity upgrade from 3 x 55 MW to 3 x 60 MW
- Carbon credit sold to voluntary market

Generating carbon credit: e.g, CDM



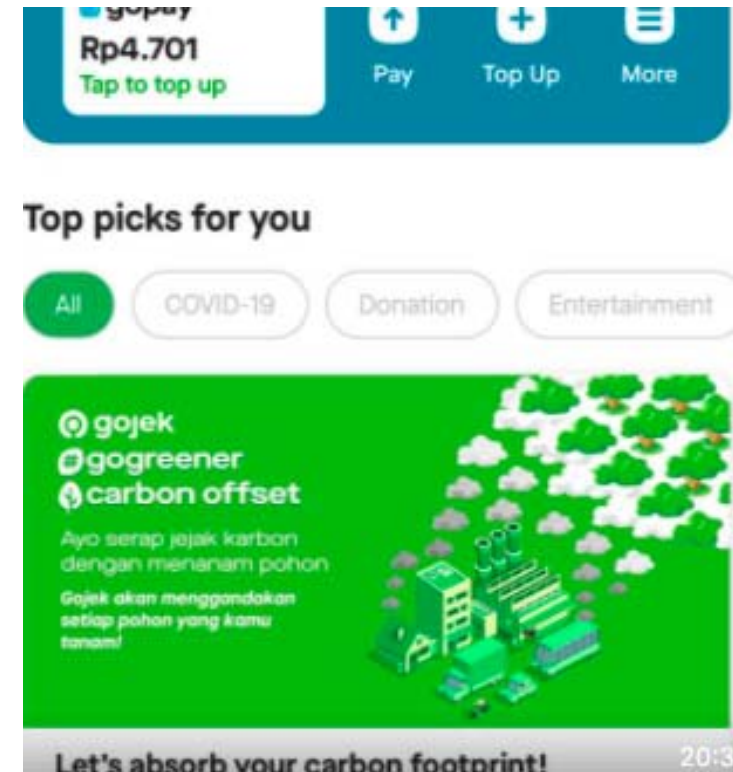
Other mechanism use similar process, future mechanism could adopt similar process

Who are the buyers?



Potential market for carbon credits generated by the carbon projects:

- Domestic market for offsetting the emission reduction obligation;
- International carbon market based on Art. 6;
- CORSIA
- Voluntary market



Gojek offers passengers to offset their emission

Conclusion

- Cities have to take leading role in climate change mitigation by involving stakeholders from all sectors
- Mitigation actions implemented by stakeholders in the cities will support in meeting NDC targets
- Carbon finance could help in financing the mitigation actions by stakeholders



Thank you

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Target mitigation sector energi

