

A LOW-CARBON DEVELOPMENT
IN INDONESIA

THE BIG PICTURE, THE SMALL PICTURES, AND THE FRAME

Sonny Mumbunan, PhD | RCCC Universitas Indonesia; WRI Indonesia

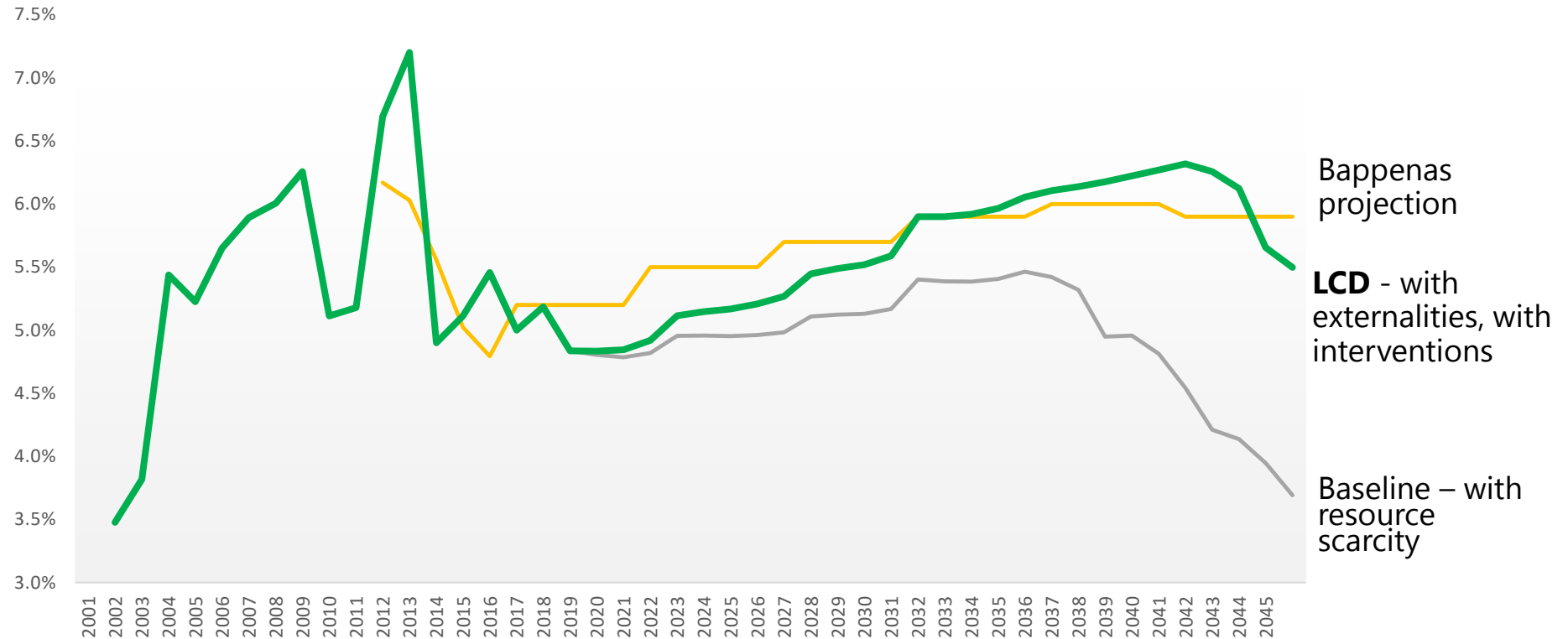
JIRE Launch, Jakarta 19 February 2019



I took this picture of a wall painting in Jl. Prawirotaman, Mergangsan, in Yogyakarta, in October 2018.

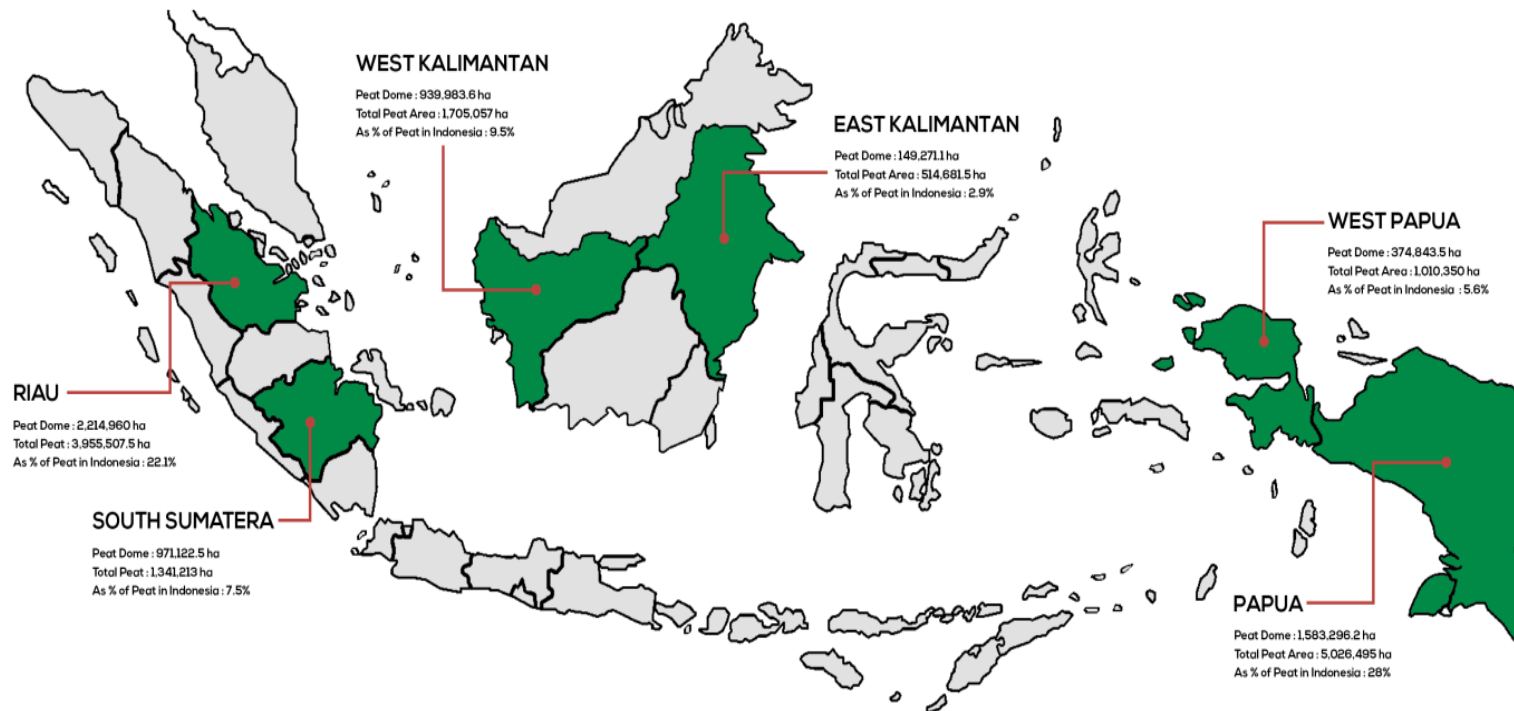
THE BIG PICTURE

Indonesia's estimated Real GDP Growth for 2018-2045



Source: Exercise of Bappenas (now being validated) from the Indonesia Vision 2045 Model

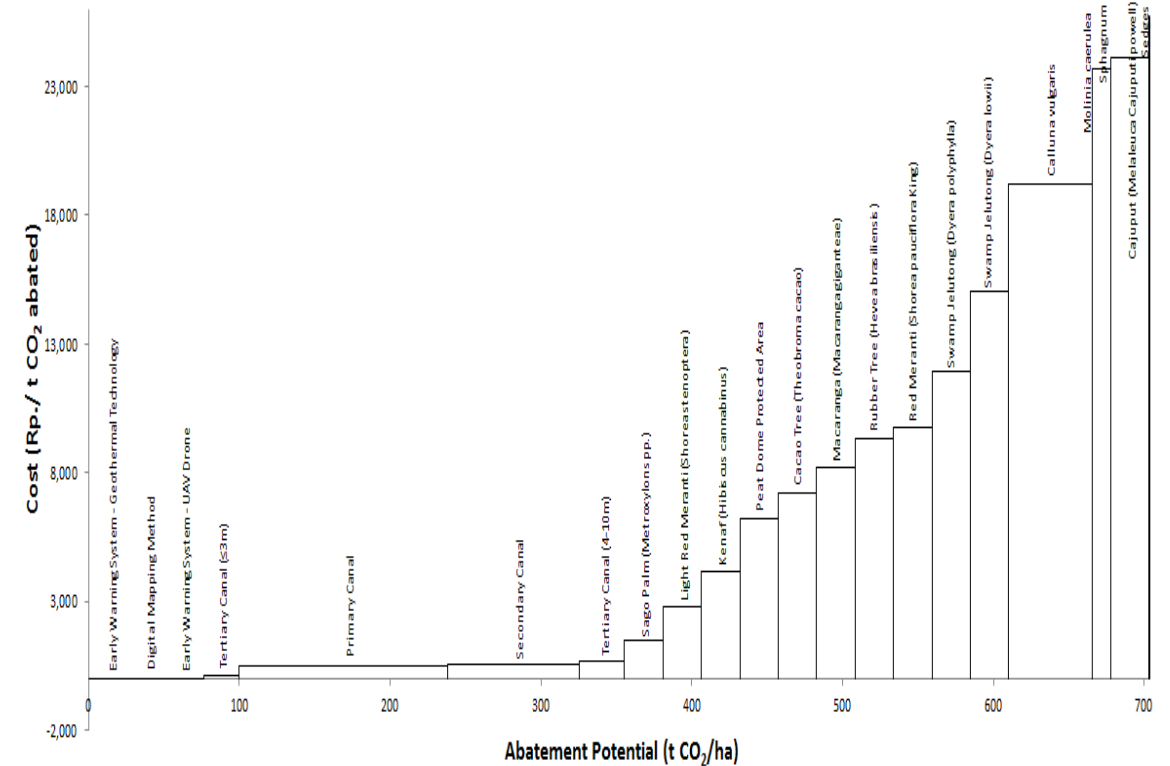
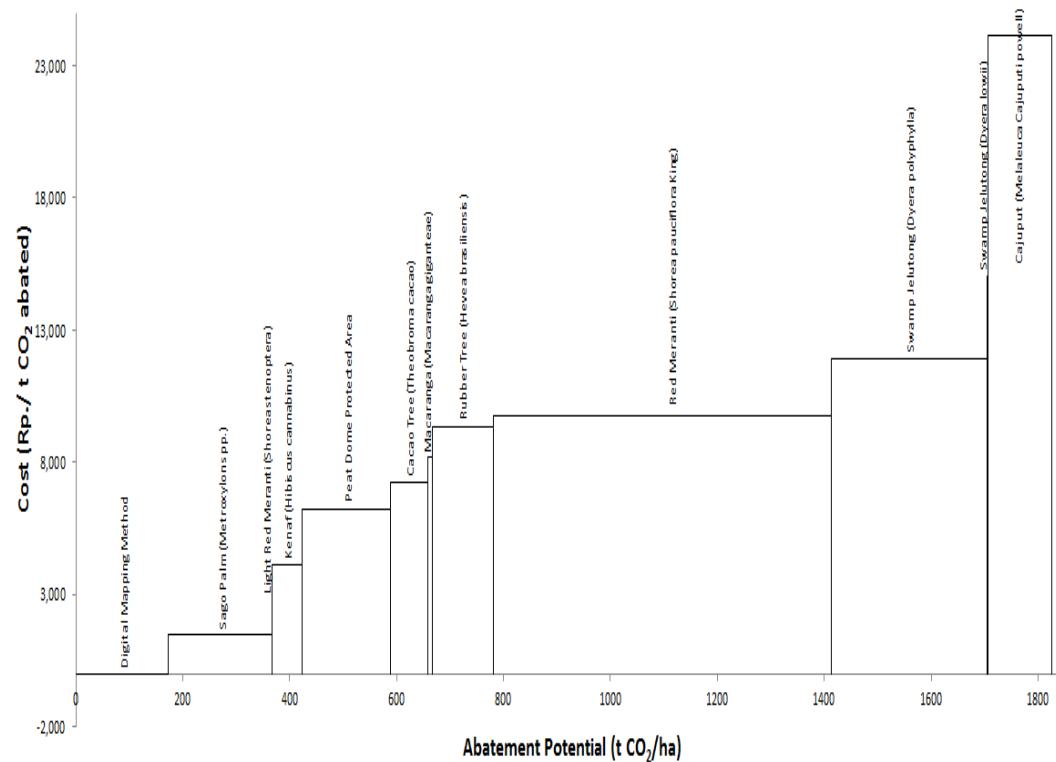
THE SMALL PICTURES



- Indonesia has **36%** of the total carbon stored in tropical peatland
- Indonesia's peat emissions in 1997 are equivalent to up to **40%** the mean annual global carbon emissions from fossil fuels (Page et al., 2002)

THE SMALL PICTURES

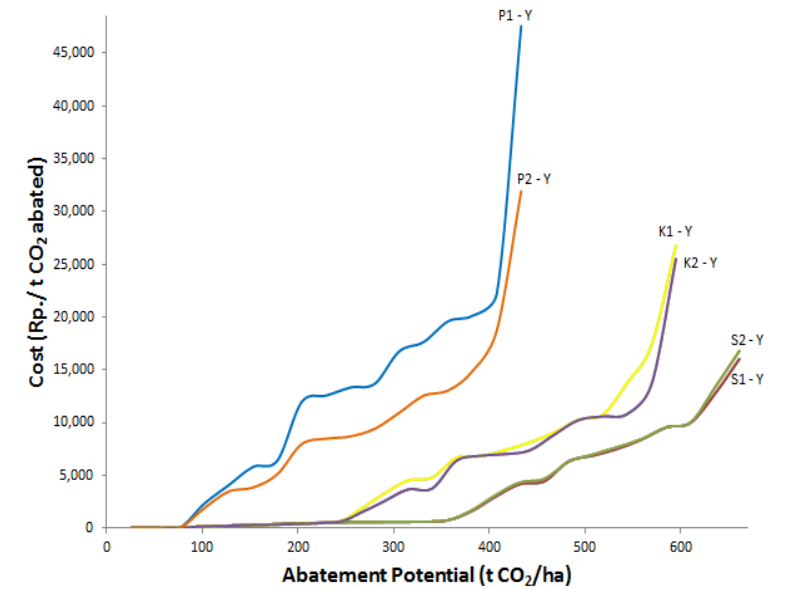
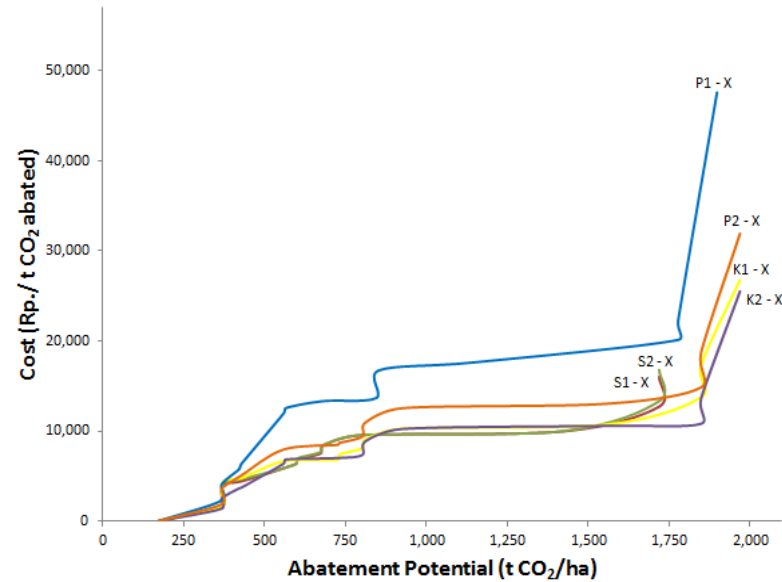
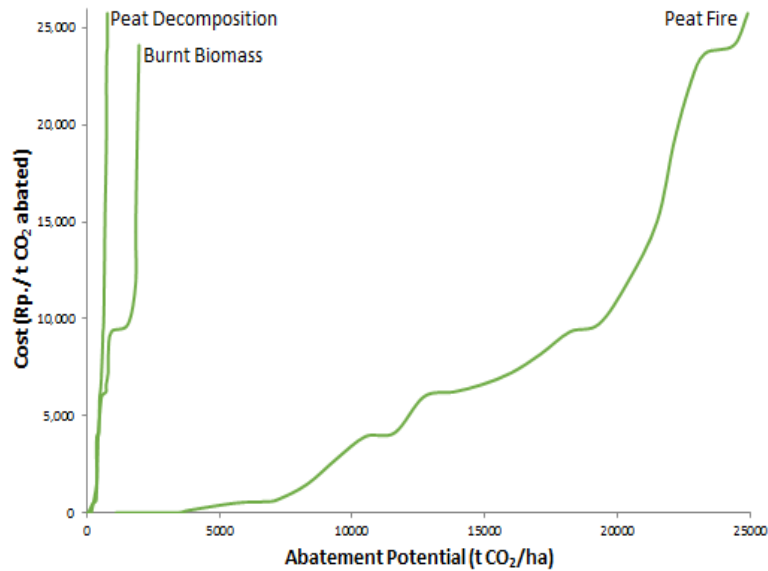
Marginal cost curves: burnt biomass (left), peat decomposition (right)



Source: Ekonomi dan Pembangunan Rendah Karbon di Lahan Gambut (Draft, 2019)

MORE SMALL PICTURES

Supply curves: Indonesia, peat provinces in Sumatra, Kalimantan, Papua



THE BIG AND SMALL PICTURES

Intervensi	Biaya per hektar (Rp/ha/Tahun)	Lapangan pekerjaan per hektar (FTE/ha)	Penurunan emisi per hektar (ton/ha)	
			Skenario 1	Skenario 2
Canal blocking	26.125.001	0,250	472	1.014
Sistem Peringatan Dini (<i>early warning system</i>)	5.299	0,000	1.094	1.323
Areal lahan pengganti usaha (<i>land swap</i>)	8.355.410	0,895	1.205	1.323
Konservasi gambut	7.878.750	0,005	1.266	1.323
Penanaman kembali lahan gambut	13.547.900	0,000	599	836
Penghentian/pengalihan bertahap dari pertanian yang mengeringkan gambut (<i>drainage-based agriculture</i>)	14.428.601	0,594	1.285	1.429

THE FRAME

Investments at scale | Public, private, blended, global, national, sub-national, village

Development planning | A system, with synergies and trade-offs

Economic transformation | Batubara, sawit, minyak, sistem pangan

Response measures | Unemployment, stranded assets

Political-economy | Tell me, why HGU data is not publicly accessible

Operating space for humanity | How much time do we have in a 1.5C world?

SONNY MUMBUNAN

A researcher at the Research Center for Climate Change of the University of Indonesia (RCCC UI) and a senior economist at the World Resources Institute (WRI) Indonesia. Founder of Basic Income Lab (www.basicincomelab.org) at the University of Indonesia. Lead author of *Cetak Biru Satu Data Indonesia*. Member of Indonesian Young Academy of Sciences (ALMI).

sonny.mumbunan@wri.org; sonny.mumbunan@ui.ac.id