Indonesia menuju Ekonomi Rendah Karbon

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dipresentasikan dalam
FORUM POJOK IKLIM KLHK

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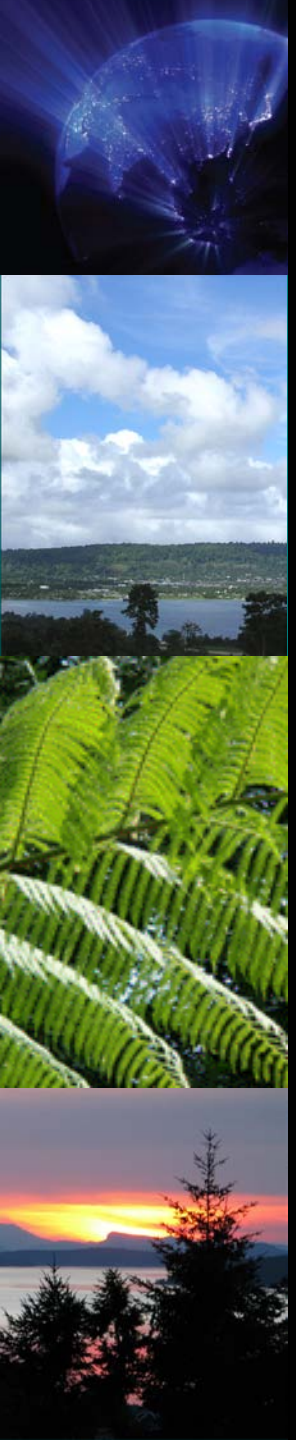
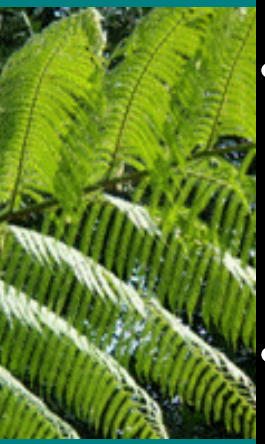


Alur

- Tujuan presentasi: Mengingatkan tentang *konsep ERK/LCE, dan mencermati situasi serta kesempatan terkini*
- Ringkasan
- Ekonomi rendah karbon (ERK): konsep
- Langkah dan kesempatan Indonesia
- Kaitan dengn instrument ekonomi
- Catatan penutup

Ringkasan Pesan tentang ERK (Ekonomi Rendah Karbon)

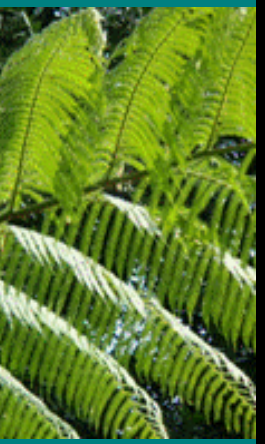


- Relevansi: Indonesia rentan terhadap dampak perubahan iklim dan menjadi bagian dari penyebab perubahan iklim
- Premis dasar: masalah perubahan iklim terjadi akibat peningkatan intensitas kegiatan ekonomi, karena itu harus ditangani dengan kebijakan ekonomi
- Investasi untuk mengendalikan emisi GRK (Gas Rumah Kaca) dan melakukan adaptasi berdasarkan ecosystem adalah upaya yang saling menguntungkan:
  - **Greening the economy** dlm kerangka pro-growth, pro-job, pro-poor
  - **Adaptation** untuk membangun ketahanan dan melindungi
- Rangkaian kebijakan pemerintah RI cukup koheren di tingkat atas
  - Penetapan target 29-41% dan pengembangan RAN-GRK
  - Kebijakan insentif untuk mendorong investasi rendah karbon
  - Pemanfaatan dana-dana murah untuk mendorong perubahan (?)
- Tantangan implementasi: membuat kebijakan operasional/aksi yang bermakna dan dapat diimplementasikan
  - *Dealing with political economy interests*
  - *Integrasi antar unit KLHK (terutama financing)*

Ekonomi Rendah Karbon

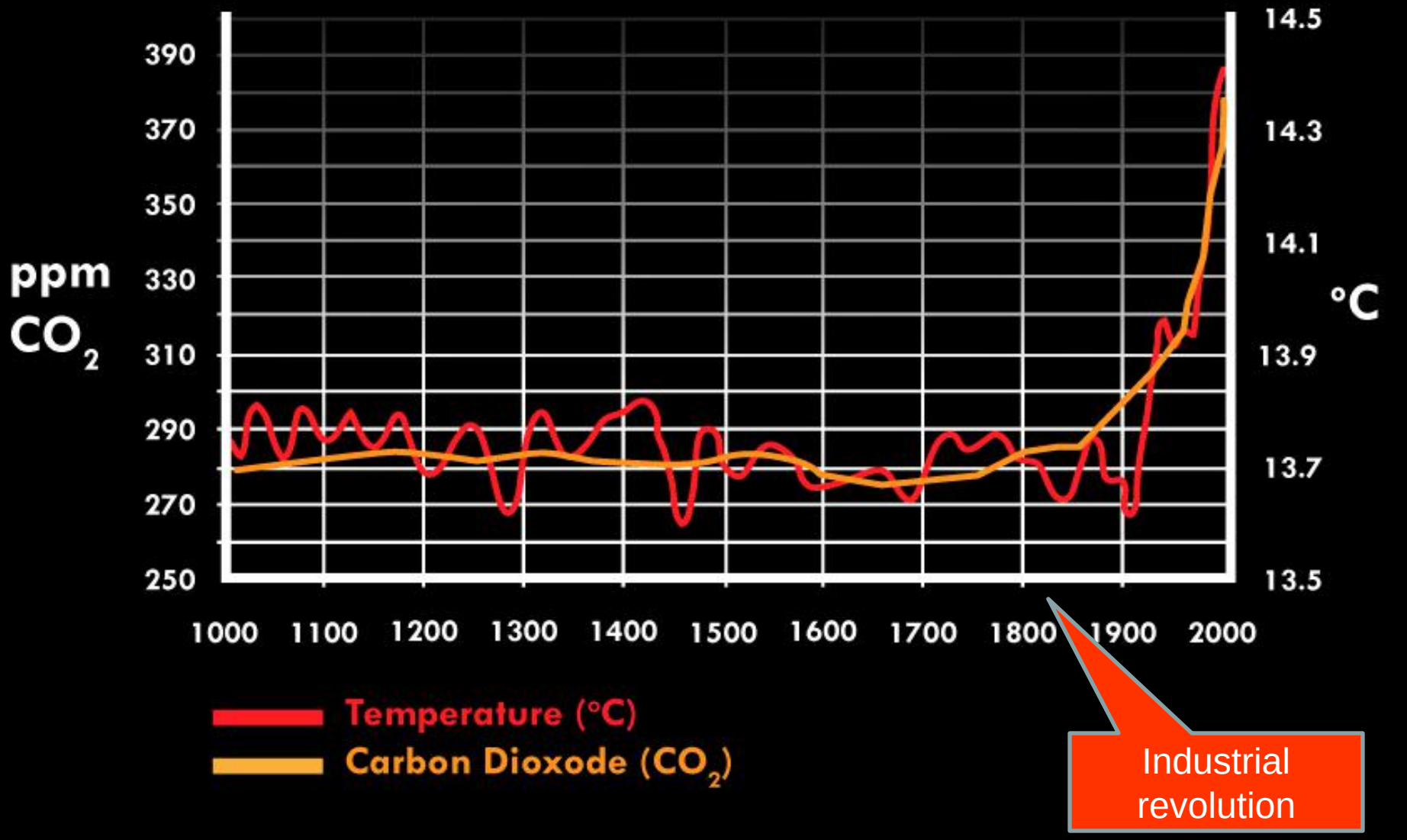
Ekonomi Rendah Karbon: Konsep

- **Premis dasar:**
  - Peningkatan emisi Gas Rumah Kaca (GRK) – dan karena itu, perubahan iklim – disebabkan oleh peningkatan intensitas kegiatan dan pertumbuhan ekonomi
  - Karena itu harus direspons dengan kebijakan ekonomi



- **Tujuan ERK sebagai strategi:**
  - Membantu menstabilkan konsentrasi GRK pada 450 ppm CO_2e untuk menahan pemanasan global agar tidak lebih 2^0 Celsius

Concentration of Carbon Dioxide in Atmosphere over 1000 years Tracks Global Temperature



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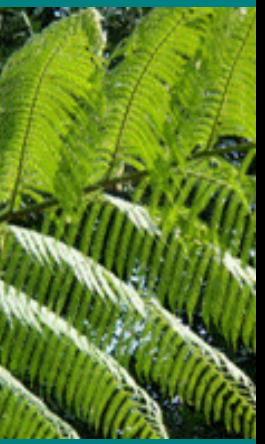
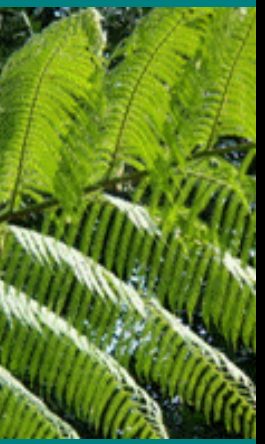
Ekonomi Rendah Karbon: Konsep



Langkah-langkah menuju ERK:

- Mengubah jalur pertumbuhan ekonomi ke jalur dengan carbon footprint yang rendah,
  - Emisi GRK per rupiah produksi (dan konsumsi) makin kecil
- Dekarbonisasi ekonomi
  - Adopsi teknologi rendah karbon dalam industri
  - Mengubah gaya hidup konsumen
- Memanfaatkan teknologi rendah karbon dalam investasi baru



Tantangan perubahan iklim yg dihadapi Indonesia

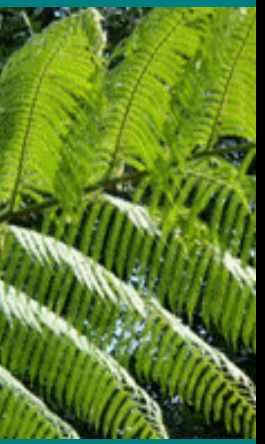
Potensi kerugian 2.5 - 7% of GDP (ADB) (prakiraan untuk 2100)

Dampak terbesar dirasakan masyarakat miskin

- Bencana alam terkait iklim meningkat (banjir, badai)
- Penurunan produksi perikanan
- Kehilangan lahan karena genangan permanen
- Kerusakan infrastruktur
- Sekitar 100 juta penduduk berisiko terkena dampak: 60 juta di wilayah pesisir; 40 juta di pertanian

- **Dalam jangka panjang: masalah kesehatan, ketahanan pangan dan perumahan**

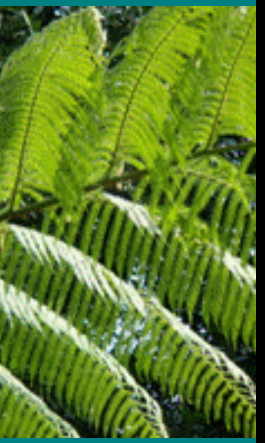
Konteks Kebijakan PI Indonesia (1/2)



Tantangan sebagai negara yang baru masuk kelompok berpendapatan sedang:

- Kemiskinan dan ketimpangan pembangunan
- Kebutuhan ekspansi pertanian dan infrastruktur, termasuk listrik
- Kerentanan terhadap perubahan iklim
- Tatakelola sumber daya alam
- Menyelaraskan kebijakan PI dengan prinsip-prinsip: pro growth, pro job, pro poor, (now with MP3EI: pro business)
- Masalah kelembagaan: kordinasi dan rent seeking

Context of Indonesia's CC Policy (2/2)



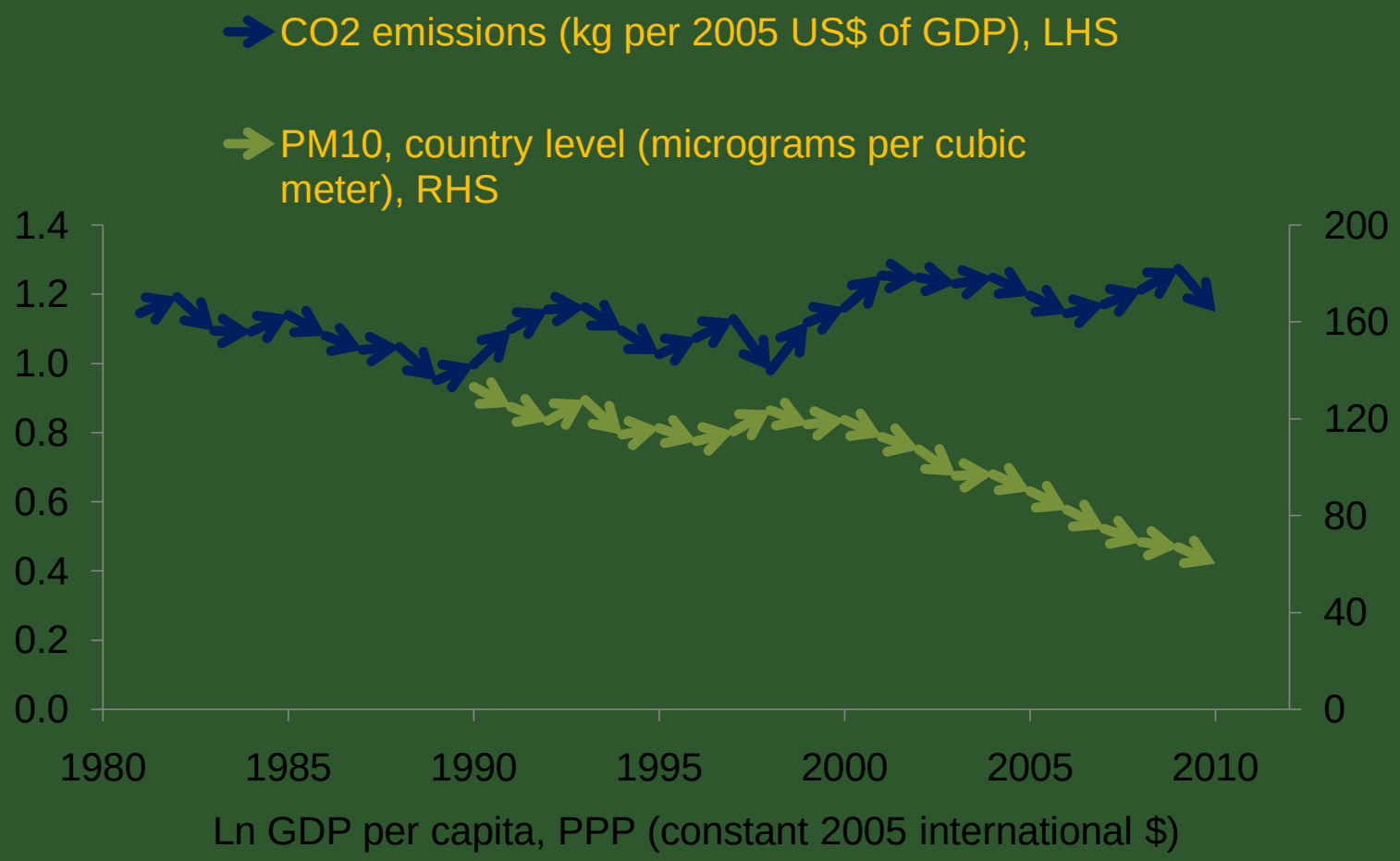
Sektor penghasil emisi terbanyak:

- Praktek pemanfaatan/pengelolaan lahan (LULUCF practices: kehutanan, gambut, pertanian): deforestasi dan degradasi hutan

- Industri: emisi tumbuh lebih cepat dari output

- Transportasi: akibat kebutuhan yg tidak terlayani dalam proses desentralisasi dan urbanisasi yang sangat cepat

- **…and a range of environmental indicators are on concerning trajectories as we are heading for HIGH CARBON ECONOMY**
  - **Plus evidence of sizeable depletion of natural capital stock**

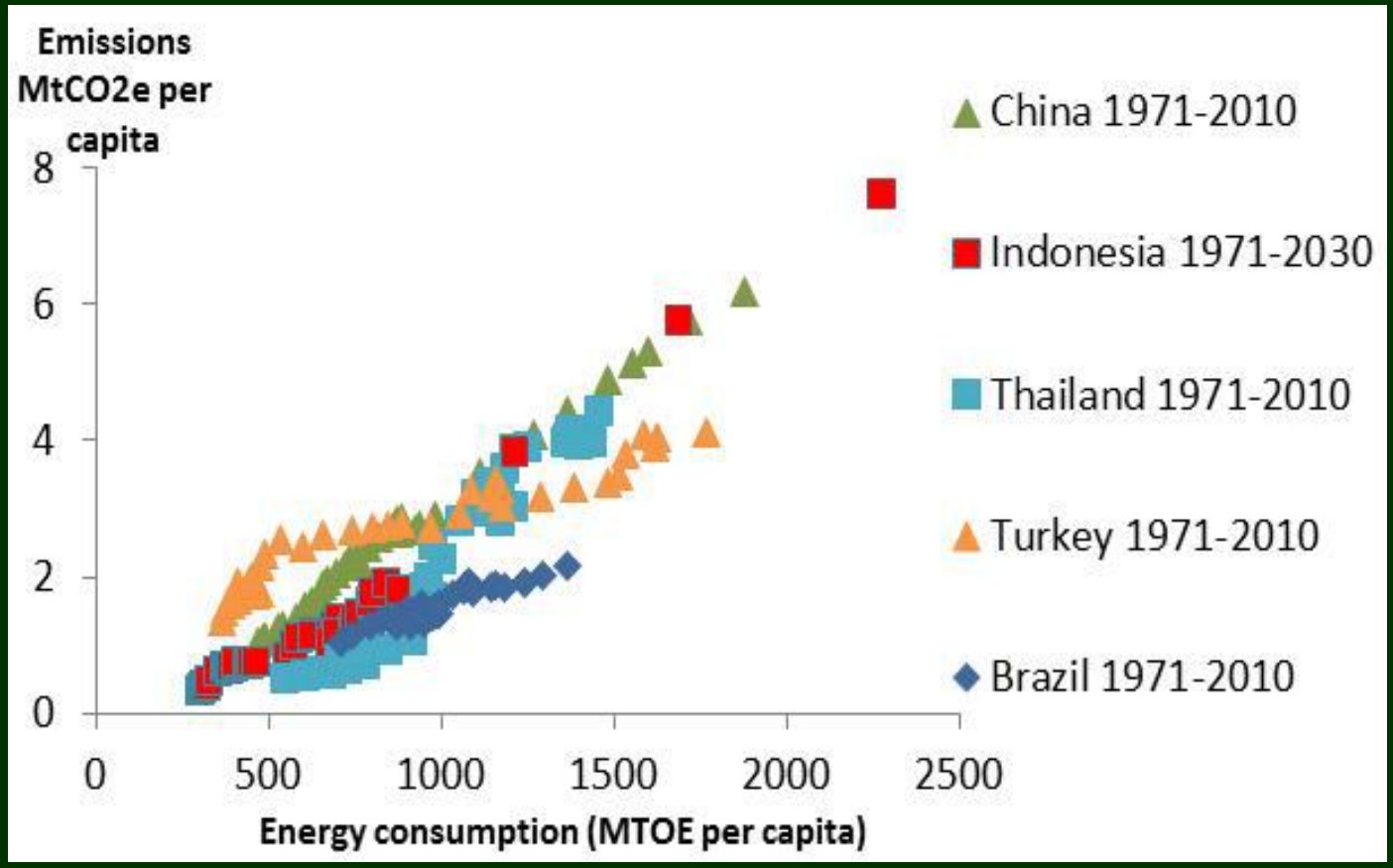


The Challenges

- What continue:
  - Growing population wants more food and energy
  - Businesses want more profits
  - Governments want more prosperity

- The challenges:
  - Can the people/consumer, government and business leaders continue to fulfill their wants and establish new models for growth ?
  - Can they simultaneously reduce climate risks ?
  - With less stringent environmental regulation ?
  - And, unclear/inconsistent incentive structure ?

While green development reforms can move Indonesia towards a lower emissions path than the business as usual projections ….



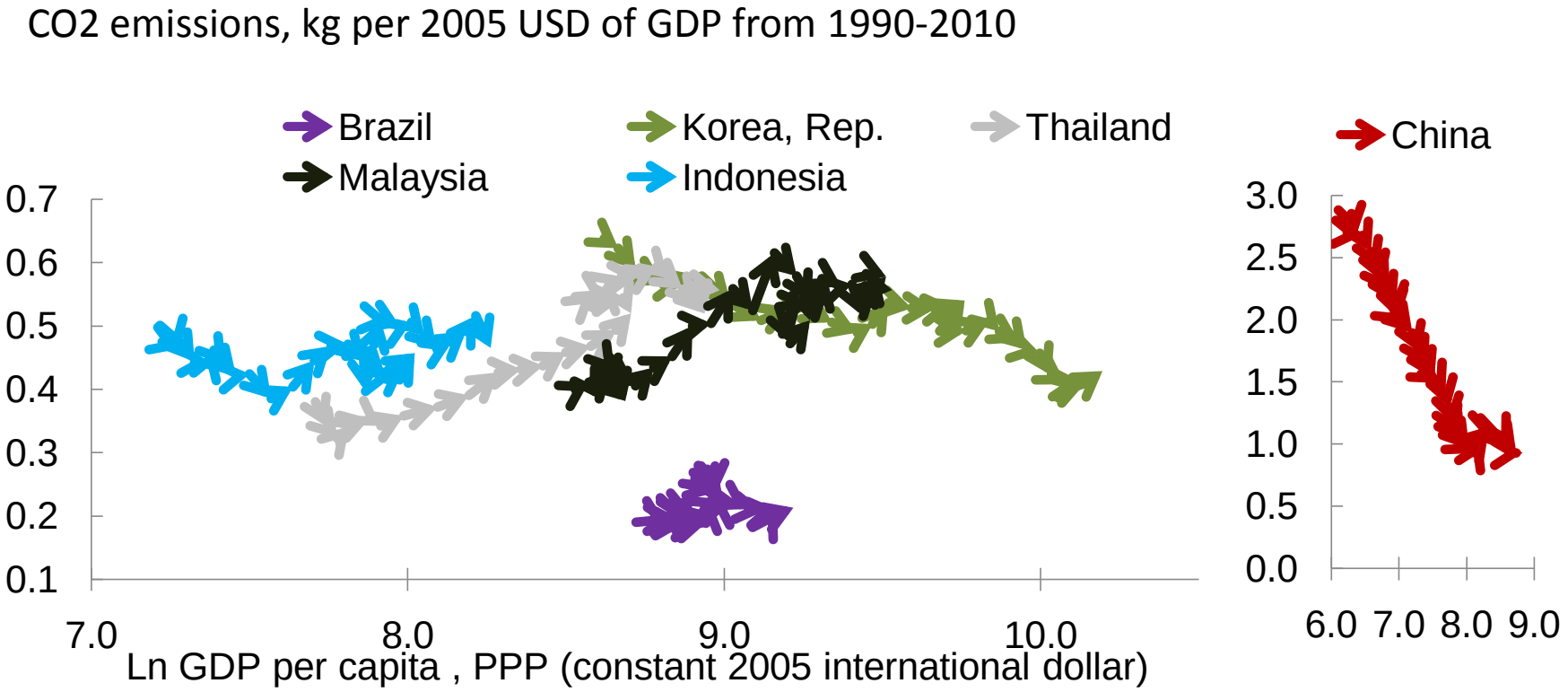
GDP/ton CO2 – grew 1% annually within the past 25 years

It needs to grow 3-4% annually for the next 15 years and beyond

Source: World Bank calculations and GoI BAU

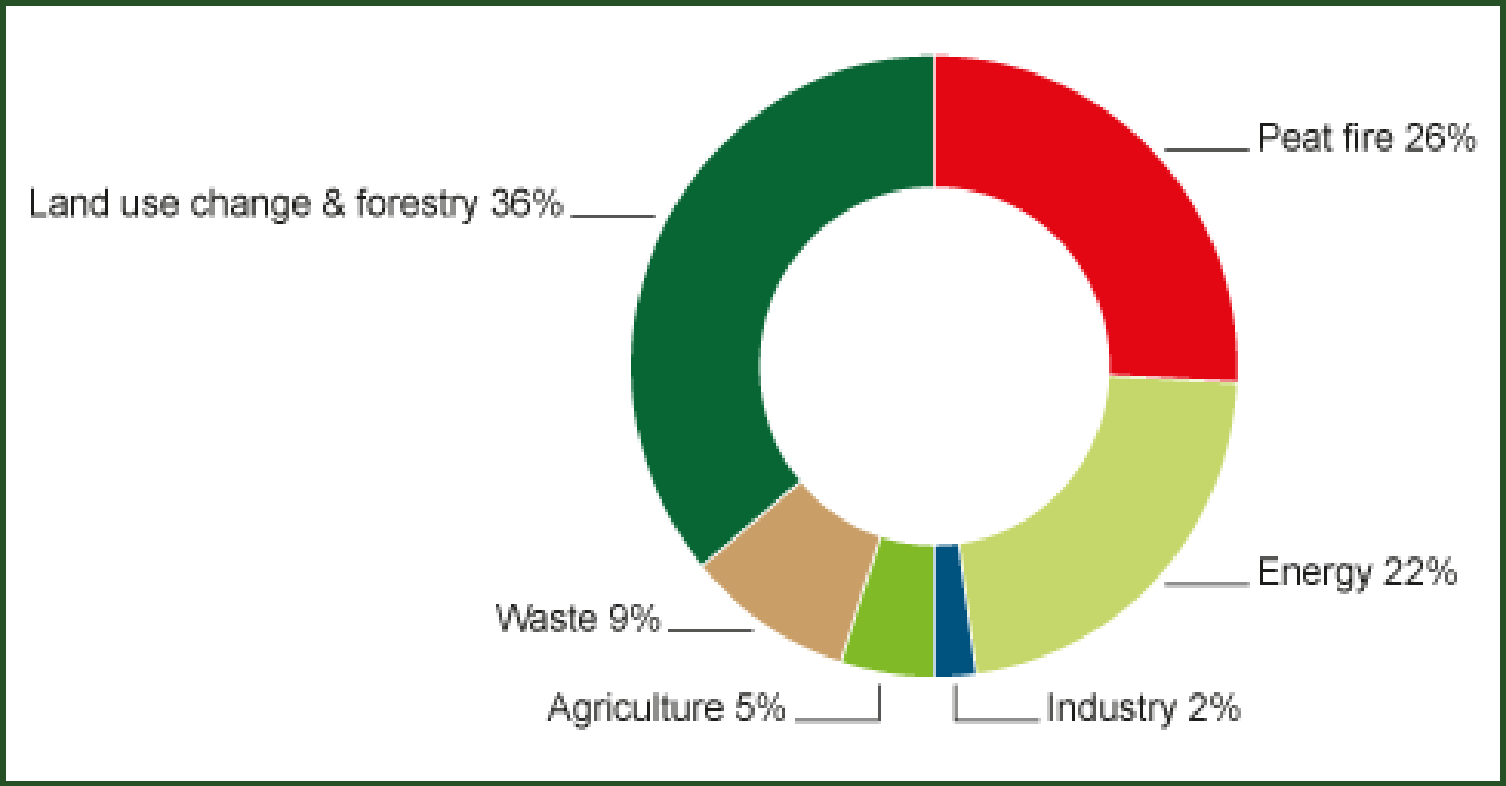
The GHG intensity of Indonesia's growth remains relatively high…

- **Indonesia's emission intensity of its GDP, although below China's level, is higher than that of peers at similar or higher income levels**



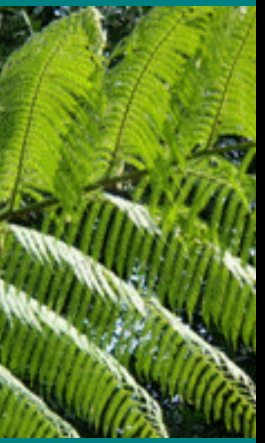
Commodity-intensive growth patterns are reflected in Indonesia's GHG emissions…

- **Land use change & forestry and peat fire are the largest contributors to GHG emissions, followed by energy**



Source: CCS in Indonesia, Global CCS Institute (Data last updated as of October 2013)

Kebijakan pemerintah: Sektoral



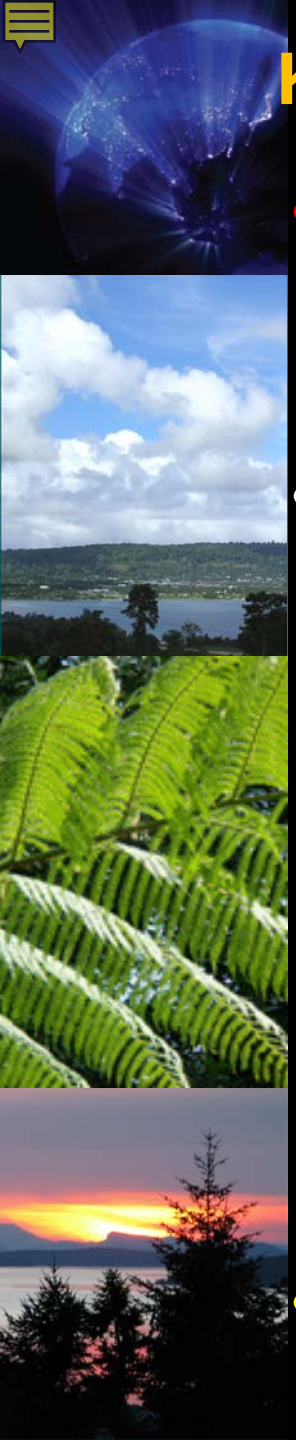
- Berdasarkan Kebijakan RAN-GRK
- Energy:
  - Pergeseran dari fossil-based ke ‘yang terbarukan’
- Industri:
  - efisiensi energi; adopsi teknologi rendah karbon
- Pengelolaan limbah:
  - meminimumkan emisi GRK
- Pertanian:
  - rasionalisasi ekspansi
- Kehutanan:
  - REDD+
- Lahan Gambut:
  - mencegah degradasi dan konversi

RAN – GRK (Presidential Regulation 61/2011): The Core of Indonesia's LCE Policy

Status kebijakan INDC ?

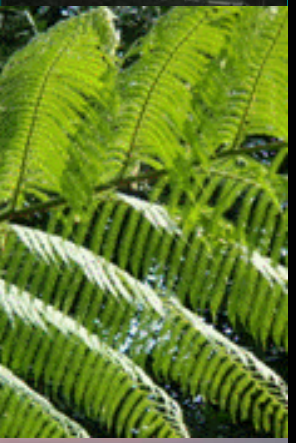
Sectors involved	Unilateral ER Target (26%)	Foreign Assisted ER Target (41%)
Forestry and peat	0.672	1.039
Waste Management	0.048	0.078
Energy and transportation	0.038	0.056
Agriculture	0.008	0.011
Industry	0.001	0.005
Total	**0.767**	**1.189**

Land use sector = 88%



Kaitan LCE dengan INSTRUMEN EKONOMI

- Jika PI adalah masalah ekonomi, IE idealnya digunakan untuk mengarahkan perekonomian Indonesia pada LCE
- IE dalam mandate UU PPLH 32/2009
  - Perencanaan pembangunan ekonomi
  - Anggaran pemerintah
  - Pendanaan
  - Incentives/disincentives
  - Economic treatment for ecosystem services
  - Natural resources and ecosystem as assets
- Have they all been made consistent with LCE as policy ?



A deeper look into Indonesia's opportunity for Low Carbon Economy

Climate, Forests & Land Use: Key Issues

Forests Matter: Economically, Socially, Environmentally

- National asset, livelihoods of 10 million of poorest 36 million
- Forest loss hurts rural livelihoods, ecosystem services
- Weak forest governance damages investment climate, rural economic potential, international competitiveness
- Forest crime robs the state and diverts public revenues that could be better spent on development goals

Key Challenge: Realizing REDD+

- Financial opportunity to change incentives, directions
- Challenges: Forest Governance, Oil Palm, Peat, Land Use/Fires

With REDD+ being part of RAN-GRK, can Indonesia still achieve 7% growth ?
In what way REDD+ is part of RAN GRK ?

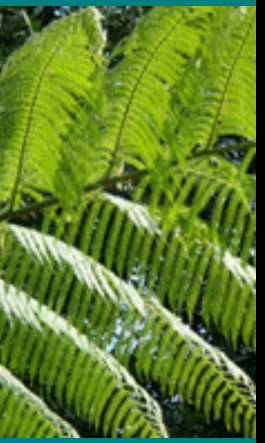
- Clear answer: Yes
- Indonesia's growth drivers >8%/yr:
  - **Communications**
  - **Wholesale and retail trade**
  - **Transport equipment manufacturing**
  - **Construction**
  - **Food and Beverages**
- Forest and plantation sectors - only small contributions to overall growth, <3.5%
  - Forest products share of GDP in 2010: just 0.7%
  - Non-food (estate, oil palm) crops share of GDP in 2010: 2.1%
  - GDP Growth without these 2 sectors? 6.04% rather than 6.10%

While forest and plantation sectors make only modest contributions to Indonesia's growth, **REDD+ is essential to achieve 26% emission reduction target**

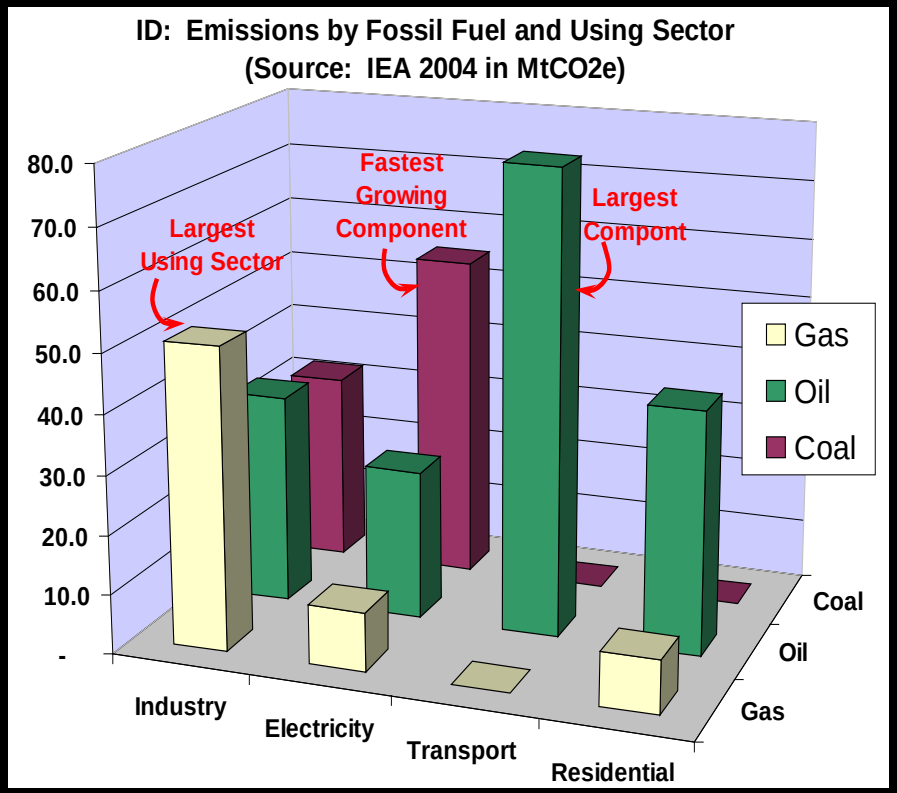
Will REDD allow continued growth in Plantation Sectors, insp ite of moratorium of new land use licensing?

- REDD+ is compatible with continued growth in palm oil output and employment:
  - By raising productivity through intensification
  - By using millions of ha of under-utilized or degraded lands (not natural forests)
  - About 12 million ha of palm oil currently under cultivation (and total 40 million hectares licensed + non licensed?)
  - almost 3 million ha have been licensed for production but are not currently cultivated
  - degraded land available (up to 15.5 million ha)
- REDD+ can help Indonesia to move toward
  - More intensive land use
  - Better forest management practices
  - More efficiency and added value
  - To sustain long term economic gains.

Indonesia's Energy (Fossil Fuel) Emission Profile



- Emissions growth > Energy growth > GDP growth
- Under BAU emissions will double every 12 years: 4x by 2030
- Coal = major power source => increasing carbon intensity
- Overall and per capita emissions are low (from fossil fuels)



Industry = largest emitter

- Inefficient fuel use
- Subsidized energy prices

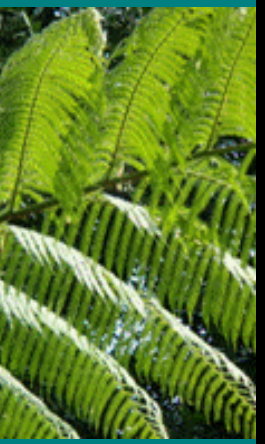
Power = fastest growing

- Need to shift out of coal in "10,000 MW" 2nd and 3rd to avoid increases in Carbon intensity

Renewable Energy Options

- Geothermal: Large Potential
- Investment needs: $12 billion!

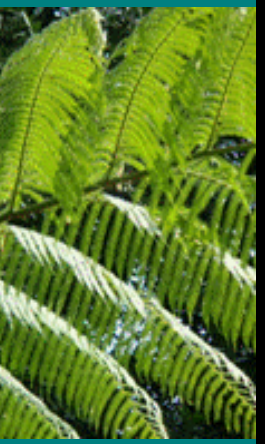
Indonesia's Approach Toward LCE



Strategy:

- Mainstreaming the adaptation and mitigation policies to medium term and annual sustainable development agenda
  - Framing the climate change policy within the pro-growth, pro-job, pro-poor development principles
  - Shifting the economy toward low carbon growth path
- Getting more pro-active internationally and ahead of competition in finance and possibly, future product competitiveness through LCE
  - The 26% voluntary emission reduction commitment
- Taking advantage of global mitigation efforts and supports
  - CIF (FIP+CTF) + REDD+
- Mainstreaming economics into National Environmental Law no 32/09 (a GovReg on Economic Instrument is coming up)
  - Planning instrument: mandatory internalization of externalities, green procurement, SEA
  - Financing: PES, trust funds, public-private partnership, etc.
  - Incentives/disincentives: green taxes, green banking, etc
- Establish DNPI, ICCTF, and REDD Agency

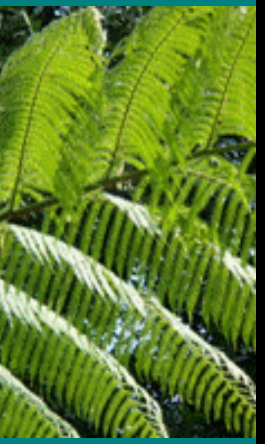
Indonesia's Approach Toward LCE (2)



- The 26% voluntary emission targets of baseline by 2020 to jump start the transition process:
  - Sectors involved: forestry, peat land management, energy, waste management, agriculture, transportation, energy efficiency in manufacturing sector.
  - To be financed by domestic resources (government + private)
  - Additional 15% target can/will be delivered with international funding support

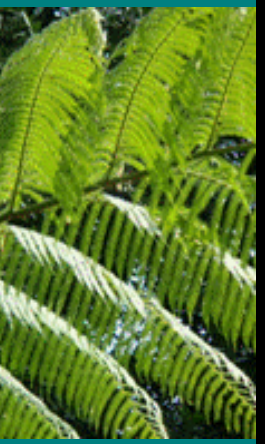
- Market-based means influence/change the incentive structure faced by the players

Indonesia's Approach Toward LCE (3)



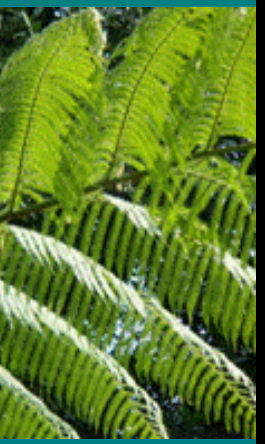
- Overarching LULUCF policy under REDD+ Strategy
  - Control forest land conversion through strengthening of spatial plan and forest land use policy
  - Strengthen sustainable forest management efforts through establishment of forest management units
  - Control of forest and land fires
  - Peat land management and rehabilitation
  - Increase forest's carbon sink capacity
  - Strengthen forest law enforcement
  - Promoting and implementing REDD+
- Providing incentives for regional governments for better forests and land use management
  - Fiscal transfer mechanism
- Adopting low cost/grant FIP (Forest Investment Program) for forest revitalization
  - Strengthening of Policy and Investment Program

Indonesia's Approach Toward LCE (4)



- Energy sector development
  - Accelerate the increase in the share of renewable energy in power sector by promoting investment
    - Priority: geothermal (large and small scale, taking advantage of technology divisibility)
      - From 1,100 MW in 2010 to 5,000 in 2014
      - 12 new contracts (USD 5 B) were signed on 26 April 2010
    - Providing tax incentives for investments in geothermal and other renewable energy
    - Providing budgetary support for renewable exploration
    - Providing pricing and off-take policies for geothermal energy
    - Adopting low cost climate financing facility for geothermal and other renewable energy.
      - USD 400 millions CTF (Clean Technology Fund) for leveraging other capital investments for geothermal

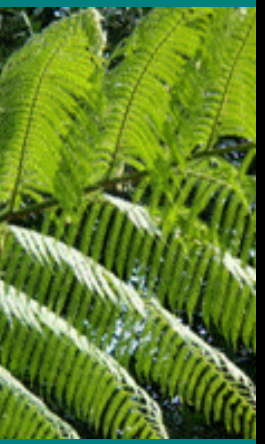
Indonesia's Approach Toward LCE (5)



- Gradual removal of fuel subsidy
  - Studies show:
    - Consistent with pro growth, pro-job, pro poor
    - Reallocate resources more fairly and for more productive use,(60%+ subsidy is enjoyed by non-deserving recipient)
    - Positive growth impacts on GDP/GRDP, Private and Government consumptions
    - Positive impact on poverty eradication
    - Need to compensate the poorest affected through direct well targeted transfer program
      - MTI proposal: only public commercial vehicles need subsidy
    - Remove price distortion so as to encourage investment in renewable energy

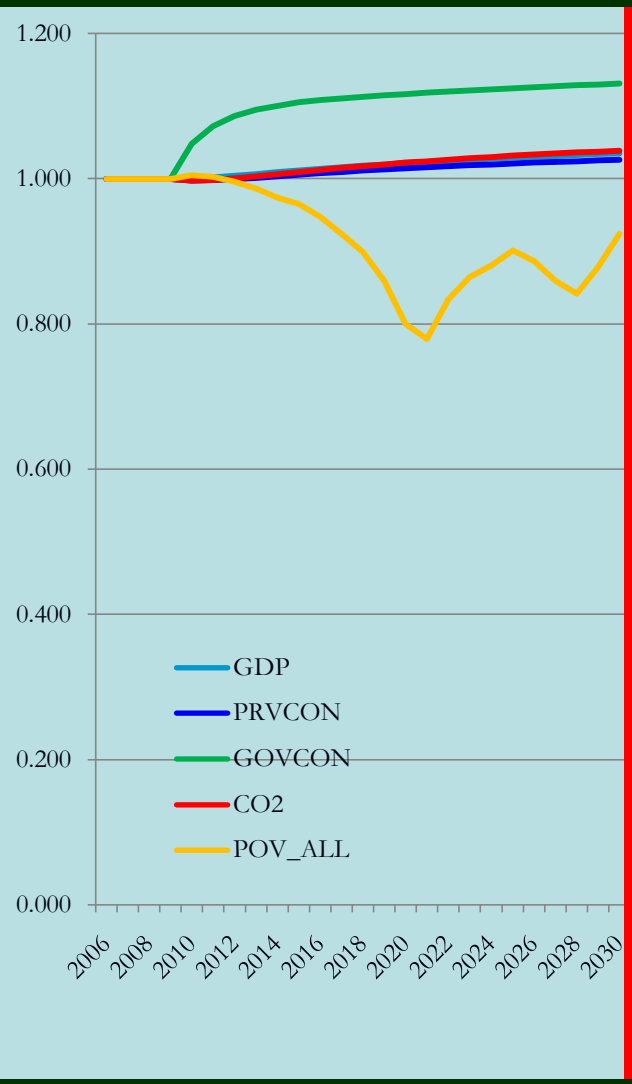
Indonesia's Approach Toward LCE (6)

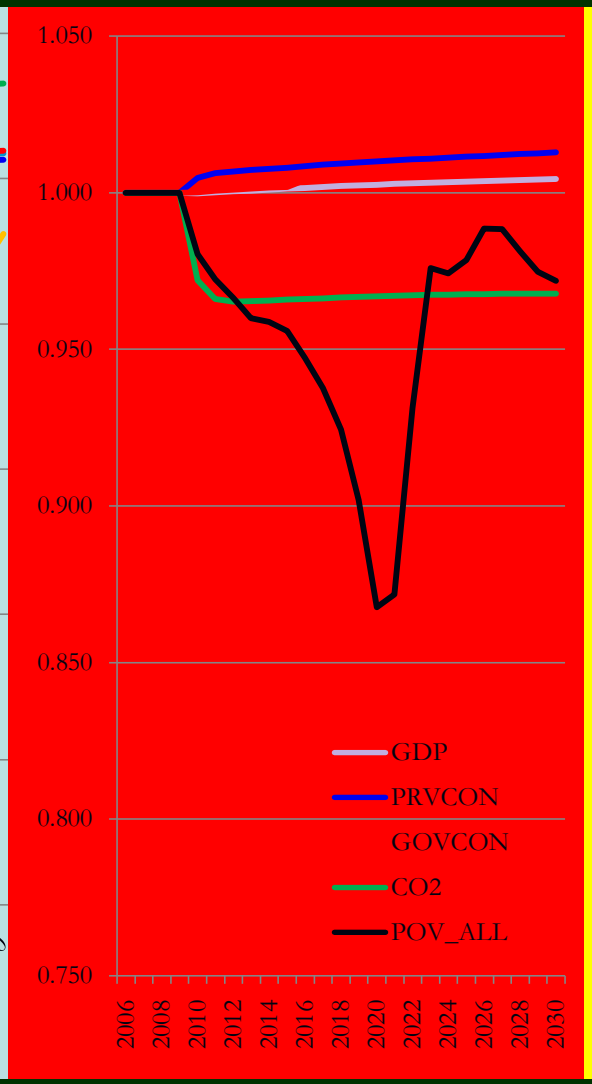
- Energy efficiency and conservation
  - Targeting energy-intensive industry (cement, metal, pulp & paper) in manufacturing sector
  - Established Energy Audit System for industry
  - Developing Master Plan for Energy Conservation including energy efficiency standards
- Energy mixed (fuel switching policy)
  - Clear ? Consistent with INDC ?

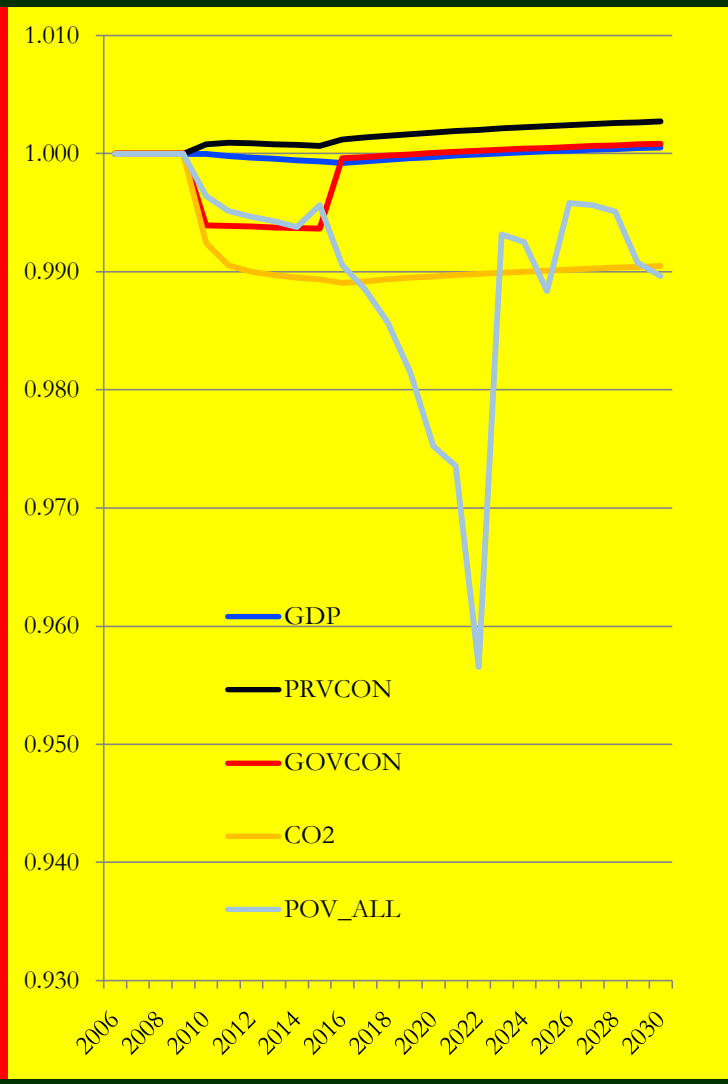


- Transportation sector
  - Move toward mass rapid transportation system
  - Move toward higher vehicle technology and fuel standard
  - Improvement in vehicle taxation and import duty
- Developing **Green Procurement** Policy
  - Greening government's offices – should lead/set example

Impact of low carbon energy policy







Removal of subsidy, fuel switching to renewables, energy efficiency: all bring positive impacts on growth, poverty reduction, consumption, and emission reduct

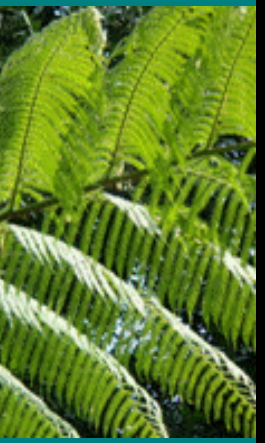
Local Governments & Cities: Future Challenges for Going Greener and Becoming Climate Resilient

Pop'n growth, urbanization: Urban growth 4%/yr ➔ greater concentration, greater vulnerability to environmental threats

Weak zoning enforcement & poorly maintained infrastructure contribute: 25 million people lives in slums, informal settlements

More frequent disaster events + increased exposure + lower coping capacity = higher impacts.

Climate variability / change increase risk level: impacts on food production, uncertainty, frequency of floods and drought



Strategy:

- Mapping of vulnerability, identifying priority threats & opportunities
- Assessment and development of tools and capacities based on local perspectives
- Develop and implement ecosystem-based adaptation

Concluding notes: challenges to move forward

- Shifting strategy toward green economy ? Need change in mind set
  - Low carbon track: Decarbonizing energy and manufacturing sectors
  - Ecosystem service tracks: valuing nature's environmental services
  - Biodiversity tracks: promoting IPES and local conservation
- Technology is available and deployable, cost sharing still an issue
- Uncertainty is the reason to do more (precautionary principle), not to wait and do nothing
- It's a multistakeholder endeavor: government, civil society, corporate sector, media
- Governance matters
- Incentive matters (economic, regulations, institutions, law & its enforcement matters)
- We tend to say "we are on the right track", but often fail to deal with devils in the details