Background:
Bold initiatives of Indonesian Government

- 26-41% Voluntary emission reduction target + commitment to green economy

- Embracing REDD+ initiatives

- Move toward Green Medium Term Development Plan

- Accessing facilities + establishing institutions for climate financing
**Programmatic Approach**

- **Request:** Ministry of Finance & BAPPENAS

- **Objective:** Assist GoI to adopt a green growth approach to development by delivering integrated policy advice, technical assistance and capacity building to key economic development planning and budgeting agencies.

- **Scope:**
  - Define development options and policies that deliver long term positive outcomes for jobs, inclusive growth, equity and the environment.
  - Identify and establish policy incentives and institutional capacity for implementation of green development at the sub-national level.
  - Support establishment of a broad constituency for green development through articulation of the rationale for going green, and a clear understanding of the up front costs, trade offs, opportunities, expected outcomes and long term benefits of green development.

Timeline

- **FY14:**
  - Analytical inputs to inform Green RPJMN (2015 – 2019)
  - Indonesia WAVES Program – preparation stage
  - Learn and Catalyze Regional and Global Networks to support Green Development in Indonesia

- **FY15:**
  - Analytical inputs and technical support to inform and monitor implementation of annual green investment plans and policy reforms across core growth sectors.
  - Foster clear linkages with Private Sector (IFC, KADIN)
  - Develop Green Banking and Finance Sector

- **FY16 – 19:** Green Development Investment Support Program
Initial Engagement – FY14

  - Macroeconomic narratives
  - Forestry
  - Agriculture
  - Energy
  - Industry (mnf)
  - Transportation

- **Indonesia WAVES (2014 – 2017)** – US $1.5 M Global WAVES TF
  - Fostering Champions within Government, Private Sector, Academia
  - Institutional Capacity Building Efforts
  - One World Bank Approach (Macro, Sectors, IFC, Finance)
  - EAP Green Knowledge Exchange Program (Joint Client/ Staff)
Macro Narrative

- **Sustainable Development and the Green Agenda** Putting green development at the heart of future development priorities

- **Context** Drawing linkages between green development and the drivers of Indonesia’s development outlook and policy priorities for economic and social sustainability

- **Why?** The case for Indonesia’s green development agenda

- **What?** What are the key policy areas and investments needed?

- **How?** How to deliver on green development and the importance of sequencing and coalition building.

- **Impacts?** What are potential impacts of green development policy scenarios for Indonesia (e.g., on poverty and social indicators, macro economic aggregates and environmental sustainability indicators)?
## Sustainable Forests

<table>
<thead>
<tr>
<th>Issues</th>
<th>Reforms</th>
<th>Investment Needs</th>
<th>Green benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest and land governance</td>
<td>• KPH program</td>
<td>• Establishment costs</td>
<td>• Increased investment in land: (community forestry, agroforestry, plantation development, etc.):</td>
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<td></td>
<td>• Bureaucratic reforms</td>
<td>• HR capacity development</td>
<td>• Additional people employed</td>
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<td></td>
<td>• Forest Monitoring System</td>
<td>• Equipment</td>
<td>• Additional income and other livelihood benefits</td>
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<tr>
<td></td>
<td>• Weak implementation of reforestation and</td>
<td>• Funding to support mapping and</td>
<td>• Added downstream benefits (GDP, exports etc.)</td>
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<td></td>
<td>CBFM programs</td>
<td>community development development</td>
<td>• Reduced national and trans-national economic impacts of fire and haze</td>
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<td></td>
<td>• Regulatory framework leads to high cost</td>
<td>• Review of HTR program</td>
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<td></td>
<td>and facilitates corruption</td>
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<tr>
<td></td>
<td>• Poor monitoring and law enforcement</td>
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<td></td>
<td>• Low implementation capacity and determination of boundaries of state forest area</td>
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<tr>
<td>Poor spatial planning</td>
<td>• Reforms under MK 45 and MK 35</td>
<td>• Development of sub-national framework and implementation</td>
<td>Reduced deforestation:</td>
</tr>
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<td></td>
<td>• NKB 12</td>
<td>• Capacity building at SNL</td>
<td>• Contribution to 26% commitment (hectares and tCO2e/year)</td>
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<tr>
<td></td>
<td>• Activities linked to moratorium on issuance of forestry licenses</td>
<td>• Funding of activities</td>
<td>• Protection of other environmental services: watersheds, biodiversity</td>
</tr>
<tr>
<td>Timber market distortions and fiscal issues</td>
<td>• SVLK system</td>
<td></td>
<td>• Improved market access for exports</td>
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<tr>
<td></td>
<td>• Licensing review</td>
<td></td>
<td>• Access to REDD+ funding</td>
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<tr>
<td></td>
<td>• Under-collection of land and timber rent</td>
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<tr>
<td></td>
<td>• Unattractive domestic timber prices</td>
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<td>• SVLK system</td>
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<tr>
<td></td>
<td>• Licensing review</td>
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</tbody>
</table>
## Sustainable Agriculture

### Potential Green Development Interventions

<table>
<thead>
<tr>
<th>A) Natural Capital</th>
<th>B) Human Capital</th>
<th>C) Physical Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1) Incentives</strong></td>
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<tr>
<td>Decrease the proportion of subsidies to private inputs in the total public support to agriculture.</td>
<td>Facilitate the adoption of green and climate-smart technologies and practices by smallholders.</td>
<td>Reform the incentive schemes between local/central governments for O&amp;M in irrigation.</td>
</tr>
<tr>
<td><strong>2) Investments (public and private)</strong></td>
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<tr>
<td>Facilitate investments across sectors through landscape approaches.</td>
<td>Increase public investments in agricultural research, especially for climate change adaptation and mitigation.</td>
<td>Public investments in the rehabilitation/development of irrigation infrastructure, taking into account climate change.</td>
</tr>
<tr>
<td>Diversify the products base to strengthen food security</td>
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<td>Develop complementary infrastructure (rural roads, rural electrification, off-grid renewable energy) to “move up the value chain”.</td>
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<tr>
<td><strong>3) Information provision/knowledge creation</strong></td>
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<tr>
<td>Develop Natural Capital Accounting (especially for land and water) in order to better assess tradeoffs within agriculture and across sectors.</td>
<td>Help farmers improve their knowledge of climate change and environmental-friendly practices through extension services</td>
<td>Step up agro-meteorological information provision to farmers to increase resilience to climate change, in synergy with the rolling out of agricultural insurance.</td>
</tr>
<tr>
<td>Assess the determinants of future food security beyond increased productivity.</td>
<td>Help rural populations diversify their activities outside agriculture: ecotourism and aquaculture.</td>
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</tr>
<tr>
<td>Better understand the contributions of beverage crops (tea, coffee, and cocoa) from an economic, environmental, and social standpoint: is certification the solution?</td>
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</tbody>
</table>
Sustainable Energy

I. Is Indonesia’s energy sector growing green?
   - Do emissions always rise with rising energy use: cross-country experience
   - Projections for Indonesia’s energy use and emissions to 2025

II. Indonesia’s energy resources and energy mix policy

III. Price incentives in Indonesia’s energy sector (link with Transport Sector)
   - Indonesia’s fuel pricing: cross-country comparison
   - Indonesia’s electricity pricing
   - Demand management through pricing

IV. Key trade-offs (link with Transport Sector)
   - Natural gas to power generation or transport (CNG) with cross-country experience of CNG
   - Power generation: increase of gas, geothermal, hydropower

V. Emerging priorities for 2014-2019
Sustainable Industry
Manufacturing Sub-Sector

- Industries analyzed: Cement, Steel, Pulp and Paper, Petrochemicals and Textiles

- Industries selected given significant emissions reduction potential, strategic benefits for long-term sustainable economic development, and several cost-effective investment opportunities likely to attract strong private sector engagement in greening the sector.
### Sustainable Transport

#### Elements of an Integrated Transportation Approach

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Measure</th>
<th>Cost-Benefit Considerations</th>
</tr>
</thead>
</table>
| 1. Improvements in emissions standards       | Improvement and enforcement of emissions standards on new and imported vehicles | - No added cost to GOI  
- Costs passed on to owners  
- Reduced air pollution & GHGs from new and existing vehicles |
| (Vehicle Technology)                         | Improvement and enforcement of in-use vehicle emissions standards       |                                                                                           |
| 2. Improved inspection and maintenance       | Enforcement of routine emission inspection as part of roadworthiness program | - Costs passed on to owners  
- Reduced emissions only if effectively enforced |
| 3. Cleaner fuels                             | Improvements in fuel standards and quality                              | - Investment is high, but benefits > costs  
- Needed to allow fuel-efficient technologies to enter market |
| Improvements in fuel standards and quality   | Use of alternative fuels (CNG and biofuels)                             | - Cost is high (esp for biofuels)  
- May need econ incentives |
| 4. Improved transport planning and traffic   | Land use and transport planning                                        | - Requires tax incentives, subsidies, pricing  
- Co-benefits in urban transport mgmt urban environment |
| demand management                            | Travel demand management                                               |                                                                                           |
|                                              | Public mass transport options                                          |                                                                                           |
|                                              | Non-motorized transport                                                |                                                                                           |
EAP Knowledge and Learning

- **Global WAVES** (Bangkok & Australia 2013)

- **Vietnam**: Access to Green Finance Workshop (March 2014) and knowledge exchange with Vietnam GG program + WBI CC Team (FY15+)

- **Korea**: Green Growth Technical Study Tour with the EAP Regional Green Transport Hub and KGGTF Secretariat (April 2014)

- **CIFOR B4R/Forest Asia May 6-7, 2014; REDD+ as key entry point for greening Indonesian economy**

- **Korean Technical Experts** to support Bappenas in developing vision and green implementation plan (May and June 2014)

- **Joint ARD/ENV/SOC CoP**: Inclusive and Green Growth (May 2014)

- **EAP Green Growth BBL** (June 2014)
TA/Lending Products – IBRD/IFC

- **Energy**: Growing Geothermal Portfolio

- **Environment & Natural Resources**: REDD Support Facility (green investments); Green Development Program for Results (potential investment); FCPF+FIP; Coremap

- **Mining**: EITI+ Program

- **Finance and Private Sector**: Lombok Regional Development (green tourism)

- **Transport**: Greening the Urban Road Sector

- **IFC Green Programs**: FIP (for private sector), Agro-Industry, Green Banking and Finance, Green Buildings, Manufacturing, Oil Palm, Renewables
Terima kasih
mahmad4@worldbank.org

A corner of Heart of Borneo Forest, Upper Kapuas, 2008; @ Mubariq Ahmad