The experience of Indonesia on Financial Schemes to Support Bioenergy Development

Indonesia Estate Crop Fund for PalmOil (IECF PalmOil)

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Background

STRATEGIC POTENTIAL OF PALM OIL

Primary Strategic Commodity

National income in foreign exchange

Job Opportunity

Raw Material for Manufacturing Industries

Feedstock for Bioenergy

Indonesia Estate Crop Fund for Palm Oil

NATIONAL STRATEGY

More stabilized palm oil commodity market during international price fluctuation

Strengthen palm oil as one of the primary products in Indonesia

Barriers, Threats and Obstacles for Palm Oil industry
Support of IECF for Bioenergy SAWIT

- Improve the utilization of palm oil for renewable energy (biofuel)
- Support research and development for palm oil based bioenergy
- Sustainability

**SUSTAINABLE SAWIT BASED BIOENERGY FUND**
Indonesian Sawit Facts

ENERGY

- CPO: 31 million Tons
- EFB: 26.3 million tons
- Fibers: 18 million tons
- Shells: 8 million tons
- POME: 1.500 MW

Biofuel = 34 M KL
Biomass Power Plant = 11.154 MW
Biogas Power Plant = 1.500 MW

- Large quantity of PalmOil
- Planted almost on every major island across archipelago
- Supported by proven conversion technologies

INCREASE ELECTRIFICATION RATIO
Milestone of Biodiesel Development

- Biofuel subsidy scheme through state budget
- New scheme biodiesel incentives through CPO Supporting Fund

- **2008**
  - Presidential Instruction No. 1 Year 2006 concerning on Provision and Utilization of Biofuel

- **2009**
  - Mandatory of biofuel utilization in transportation, industry, commercial, and electricity generation sector

- **2013**
  - Ministry Of Energy And Mineral Resources Regulation No. 26 Year 2013 >> Biodiesel utilization increased from B7,5 to B10

- **2014**
  - Ministry Of Energy And Mineral Resources Regulation No. 20 Year 2014 >> increase the percentage of biodiesel blending roadmap
  - Technical testing of B20

- **2015**
  - Ministry Of Energy And Mineral Resources Regulation No. 12 Year 2015 >> Biodiesel utilization increased from B10 to B15
  - Ministry Of Energy And Mineral Resources Regulation No. 29 Year 2015 >> Supply of Biodiesel through the financial support of palm oil fund

- **2016**
  - B20

Sawit Indonesia, more sustainable than ever
## Biodiesel Sawit Roadmap

<table>
<thead>
<tr>
<th></th>
<th>Unit</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandatory Biodiesel</td>
<td>%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>30%</td>
</tr>
<tr>
<td>The need of Biodiesel</td>
<td>Million KL</td>
<td>6.93</td>
<td>7.14</td>
<td>7.35</td>
<td>7.58</td>
<td>11.70</td>
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<tr>
<td>The need of CPO</td>
<td>Million Ton</td>
<td>6.31</td>
<td>6.50</td>
<td>6.69</td>
<td>6.89</td>
<td>10.65</td>
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<tr>
<td>CPO production forecasts</td>
<td>Million Ton</td>
<td>33.6</td>
<td>35.3</td>
<td>37.0</td>
<td>38.9</td>
<td>40.8</td>
</tr>
</tbody>
</table>

| The percentage of the use of palmoil for biodiesel from the total production of CPO | % | 19% | 18% | 18% | 18% | 26% |

The use of CPO production for Biodiesel is in line with the increase in mandatory biodiesel. In 2020, the implementation of mandatory B30 is expected to absorb 26% national production of CPO.
Benefits of Sawit Biofuel

**For ENERGY**

1. To increase energy diversification to raise the level of energy security
2. To decrease fuel oil imports
   - The use of B20 could lower as much as 6.93 Million KL of oil fuel imports and saves the country’s foreign exchange worth USD 2 Billion
3. Cutting down CO2 emission
   - The use of B20 could lower the CO2 emission 9 – 18 Million tons CO2 (the amounts depends on the use of land)

**For PALM OIL**

1. To maintain CPO price
   - The use of biofuel since late August 2015 proved to be able to maintain the stability of CPO price
2. To escalate the value added of CPO
   - The use of CPO to biodiesel is increasing the value added of CPO product Rp 9 Trillion
3. To add Jobs
   - The amount of on-farm and off-farm labor are 830 Thousands people
Palm Oil Sustainability

ENSURING SUSTAINABILITY IN PALM OIL CULTIVATION AND SUPPLY CHAINS
Public Private Partnership

GOVERNMENT
- Levy regulation
- Biofuel mandatory regulation
- Verification

SYNERGY PalmOil Business Development
- Levy fund
- Palm oil/feedstocks
- Biodiesel production

PRIVATE

SAWIT FUND
- Managing sawit fund
- Advancing palm oil industry
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THANK YOU
The Use of Fund

- **Human resource development** (counseling, education, training, mentoring and facilitating)
- **Research & Development** (breeding, cultivation, post-harvest, processing, industry, market, value chain from upstream to downstream)
- **Promotion** (Providing balanced and fair information on Indonesian government policy perspective pertained to palm oil industry, disseminating and enhancement market information)
- **Replanting** (increased productivity, land optimization)
- **Facilities and Infrastructure** (seeds, fertilizers, pesticides, machinery, transportation, road infrastructure and markets, verification)

1. Plantation development
2. Meet the demand for food BBN (biofuels)
3. Downstream industrialization of plantation

*From PalmOil for PalmOil*
*Dari Sawit untuk Sawit.*
Grant Research Programme

1. Grant Research Programme is issued to provide flexible and long term research on palm oil involved R&D institution from both public and private.

2. In 2015, IECF PalmOil has supported researches on 12 aspects of palm oil including bioenergy/biofuel, sustainability and biomaterial/non food application.

3. First phase of Grant Research Program has selected 8 R&D projects on bioenergy from 54 project proposal granted.

4. The research project covers R&D on biogas, next-biofuel generation, gasification, torrefaction and pelletizing

<table>
<thead>
<tr>
<th>Research Topic</th>
<th>Institution</th>
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<tbody>
<tr>
<td>Identification of Compounds Effect of Glycerol Saturated And Compounds In Fuel B-Xx Against Filter Blocking Tendency In Vehicle Fuel Systems</td>
<td>BRDST - BPPT</td>
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<tr>
<td>Oil Solid Waste Conversion into Methanol and diethyl-ether through Gasification Process</td>
<td>LPPM ITB</td>
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<td>Torrefied biopellet from palm oil trunk</td>
<td>LPPM IPB</td>
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<tr>
<td>Crude Oil Production Technology Development of Pyrolysis Plant (Bio-Crude Oil) Made From Empty Fruit Bunch Biomass and palm fronds</td>
<td>LPPM ITB</td>
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<td>Solid Waste Conversion from Palm Oil Industry Being Activated Carbon Nano and Biofuel</td>
<td>P3TKEBTKE</td>
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<tr>
<td>Development of PalmOil-Based Fuel</td>
<td>BRDST - BPPT</td>
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<tr>
<td>Pilot Project Pome Biogas Production Capacity and Production of Organic Fertilizer By Utilizing Empty Fruit Bunch Oil To Boost Economies of Biogas Power plant</td>
<td>PT. Pasadena Engineering Indonesia</td>
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