Origin of Palm Oil

- The oil palm tree (Elaeis Guineensis Jacq.) originated from West Africa in a belt from Angola to Senegal.
- The earliest archaeological evidence on palm oil consumption was found in an Egyptian tomb in Abydos.
  - As no palm oil was produced in the country, the evidence implied that the oil had been traded during the time of the Pharaohs, 5,000 years ago.

The oil palm tree (Elaeis Guineensis Jacq.) originated from West Africa with a history of consumption dating back to 5,000 years. Today it feeds ~3 billion people in 150 countries.
Global Palm Oil Industry

- Today, palm oil is one of the 17 major oils traded in the global edible oils & fats market.
- Palm oil can be found in one out of every ten food products worldwide.
- Key importers of palm oil today are China, India, EU-27 & Pakistan.

Palm oil is expected to make up 34-46% of vegetable supply (2010-2020F)

These days, palm oil and derived products are channeled into worldwide industrial and commercial activities to churn out food products as well as non-food applications.

Source: MPOC Publications, USDA Database
Palm Oil Benefits

Versatile

- As the cheapest traded edible oil, palm oil can be used for food and non-food purposes
- Examples of food use
  - Cooking Oil
  - Shortening
  - Margarines
  - Vanaspati
  - Cocoa butter substitutes
  - Key ingredient in instant noodle production
- Examples of non-food use
  - Oleochemicals
  - Biodiesel
  - Energy generation

Healthy

- Balanced composition of saturated and unsaturated fatty acids
  - Saturated palmitic acid (44%),
  - Monounsaturated oleic acid (40%)
  - Polyunsaturated fatty acids (10%)
- Can be blended with other soft oils to meet AHA\(^1\) recommended ratio of 1:1:1 (saturated, monounsaturated, and polyunsaturated fatty acids)
- High carotene content
  - 15x higher than carrots
  - 50x higher than tomatoes
- Cholesterol-free, no risk of trans fatty acids
  - Does not require hydrogenation in food use
- Contains vitamin E
  - Highest content of tocotrienols among edible oils
  - Also contains tocopherols
  - Meets the FAO/WHO Food Standard requirements under the CODEX Alimentarius Commission Programme.

Sustainable

- Compared to other oilseeds, the oil palm tree:
  - Has the highest oil yield per ha
  - Requires the lowest fertiliser inputs (~1MT of fertiliser per planted ha)
  - Productive cycle of ~25 years
- RSPO-compliant producers are required to meet specific environment & social criteria
- Eco-friendly practices
  - Wastage from plantations are reused e.g.
    - EFB – mulched as fertilisers back in estates
    - Palm kernel shells – biomass feedstock at mills for steam generation
    - Palm oil mill effluent – biogas for electricity generation

Not only does palm oil have the potential to feed world due to its abundance, but it is also a versatile, healthy and a sustainable source of oil.

Source: MPOC publications

1. American Heart Association
Source: MPOC publications
Oil Palm Cultivation Area

- **Prime Area**
  - +/- 5 degrees off the equator
- **Plantable Area**
  - +/- 10 degrees off the equator

- Located within the equator band
- Humid tropical climate
  - Temperature range of 24-32°C throughout the year
  - Ample sunshine (~5-7 hours a day in all months)
  - Evenly distributed annual rainfall of ~2,000mm
  - Soil pH <7.5
  - Relative humidity ~85%
  - No stagnant water

![Map showing oil palm cultivation areas](image)

**Physical Conditions for Oil Palm Planting**

Source: MPOC publications, The Oil Palm 4th edition by R.H.V. Corley, P.B. Tinker

**Oil Palm Mature Area (000 Ha)**

- Global oil palm mature areas: 10.5m ha in 2007
  - Indonesia: 5.0m ha
  - Malaysia: 3.9m ha
- Other oil crops
  - Soybean: 94.6m ha
  - Groundnut: 21.9m ha
  - Sunflower: 24.0m ha
  - Rapeseed: 27.2m ha

**Oil Yields (MT/Ha)**

- Average lifespan of a oil palm tree ~25 years
- Palm clones planted in Malaysia & Indonesia: Tenera

Relative to other oilseeds, the oil palm tree is the highest yielding oil crop at an average yield of 3.65MT/ha

Source: Oilworld Database (June 2008)
Palm Oil Industry Against Economic Cycles

Historical data shows that demand for palm oil as a food product has always been increasing despite peaks and troughs in economic cycles.

- There has been several recession periods since 1980.
- CPO prices cycles have been influenced by supply and demand dynamics impacted by economic conditions.
- However, Malaysian palm export data has shown historical upside trend.
- As a food necessity, demand for palm oil has always been on increasing trend due to world population growth.
- Outlook on CPO prices expect to range between RM2,000-2,300/MT (US $570-660/MT) by end of 2009.

Note: IMF regards periods when global growth is less than 3% to be global recessions.

Source: MPOB website, OECD Financial Indicators database

Palm Oil Production & Midterm Prospects

At a forecasted supply growth of 8%, palm oil is well positioned to meet global food and non-food demands. Malaysia is the second largest producer and leading exporter of palm oil.

Source: LMC - Oilsseeds Outlook for Profitability to 2020 (Jan 2009)
**Economic Importance To Malaysia**

- Today, the palm oil industry has become a key economic growth driver in Malaysia
  - Second largest contributor to 2008 external trade (~6.9% at RM 46bn)
  - Direct employment ~570,000 people
  - Estimated total employment ~860,000 (incl. downstream)

**Malaysia External Trade (2008)**

<table>
<thead>
<tr>
<th>Sector</th>
<th>No.</th>
<th>Capacity (MT/annum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FFB Mills</td>
<td>408</td>
<td>93.2m</td>
</tr>
<tr>
<td>Palm Kernel Crushers</td>
<td>41</td>
<td>5.2m</td>
</tr>
<tr>
<td>Refineries</td>
<td>50</td>
<td>19.2m</td>
</tr>
<tr>
<td>Oleochemical</td>
<td>17</td>
<td>2.6m</td>
</tr>
</tbody>
</table>

The palm oil industry has been a key economic growth driver by creating jobs and triggering downstream activities to bring in revenue for national development and stability, especially Malaysia & Indonesia

1. FELDA: Federal Land & Development Authority
2. The corporate merger of Guthrie, Golden Hope Plantations and Sime Darby was completed in 2007

**History Of The Malaysian Palm Oil Industry**

**Key Milestones**

- **1800s**: Oil Palm Introduction
  - First commercial planting in Tennamaran Estate, Selangor
- **1875**: Introduced to Malaya by the British as an ornamental plant
- **1917**: Oil Palm Commercialisation
- **1960s**: Crude oil and condensates 6.3%
  - Malaysia increased cultivation pace of oil palms
- **1970s-1980s**: Introduction of land settlement schemes (e.g. FELDA) as means to eradicate poverty
- **1980s**: Malaysia overtook Nigeria as world’s largest exporter of palm oil
- **1970s-1980s**: Expansion of domestic refining & fractionation facilities
- **1980s**: Malaysianisation of 3 plantation companies, namely Guthrie, Golden Hope and Sime Darby
- **Founding of KL Commodity Exchange (KLCE)** for price setting, hedging and dissemination of market info
- **TODAY**: Market Expansion & Product Diversification
  - Malaysia and Indonesia are top palm oil producers
  - Existence of world’s largest listed plantation company via the Synergy Drive merger
  - China, India, & EU are key consumers of palm oil

1. FELDA: Federal Land & Development Authority
2. The corporate merger of Guthrie, Golden Hope Plantations and Sime Darby was completed in 2007

Source: MPOC Publications
History Of The Malaysian Palm Oil Industry

Oil Palm Introduction and Commercialisation
- The oil palm tree was first introduced to Malaya by the British as an ornamental plant in 1875 but it was only commercially planted in Tennamaran Estate, Selangor 1917 by Henri Fauconnier.

Crop Diversification Efforts
- Despite threats of the Emergency during the 1960s, the oil palm expansion in Malaysia was rapid as its economic potential was recognised by the Malaysian Government as a complementary crop to rubber in the poverty eradication programme.
  - The Federal Land Development Authority (FELDA) first introduced the oil palm in 1961 on an initial size of 375 ha to help the landless farmers.
  - Due to the fall in rubber and tin prices, estate planting of oil palm tended to be on old rubber estate land when the prospects of high yields and profitability of palm oil were recognised.
  - In 1966, Malaysia overtook Nigeria as the world’s leading exporter of palm oil.
- Compared to Malaysia, the Indonesia government only started to directly invest in state owned plantations in 1968.

Export Diversification
- Realising from historical experience with rubber and tin that dependence on narrow product lines can bring price downswings, the Malaysian government embraced diversification as a way to sustain production and exports.
  - Acting against the advice of international agencies, the Malaysian government began in the late 1970s to encourage a shift from CPO exports to refined products through taxation and incentive policies.
  - The 1980s saw the “Malaysianisation” of 3 major plantation companies previously run by the British i.e. Sime Darby, Guthrie and Harrison & Crossfield (later Golden Hope Plantations)
  - 1980 also saw the founding of the Kuala Lumpur Commodity Exchange (KLCE), a key instrument for price setting, hedging and dissemination of market information to reduce market risk in the trading of palm oil.

Industrialisation & Market Expansion
- Seeing the need for product development to sustain the upstream development of palm oil, the industry was flagged for sectoral support under the Industrial Master Plan of 1986 (IMP1).
  - The IMP1 emphasised on the rationalisation of refining and fractionation to increase efficiency and competitiveness of Malaysian palm oil in the world market.
  - As a result, Malaysia became a hub of palm oil downstream processing as it was more economical to export refined products than to have them processed in Europe.
  - While Malaysia became a leading exporter of refined oil, demand for CPO exports then shifted to Indonesia as further oil palm expansion was encouraged through Indonesian government initiated smallholder schemes.
- By the time the Industrial Master Plan 2 (IMP2) was launched in 1996, Malaysia’s processing capacity has exceeded the supply of CPO.
  - IMP2 led to the expansion of oil palm hectarage to East Malaysia and also encouraged the private sector to seek raw materials from abroad.
  - IMP2 also saw stimulated participation in R&D to meet the call for productivity gains and further value-added product development along the value chain.
  - The Malaysian Palm Oil Council (MPOC) was tasked to develop a comprehensive strategy to position Malaysia as an international leader in the oils & fats market through promotional activities.
- Despite Indonesia having overtaken Malaysia as a leading producer of palm oil since 2007 due to its vast landbank expansion and labour opportunities, the industry is still thriving in Malaysia.
  - Malaysia is still a leading exporter of palm oil to major consumers in China, EU and India.
  - In fact, Sime Darby and FELDA, both Malaysian-based companies are today the world’s largest plantation companies (based on planted area).
Malaysian Oil Palm Area

- Oil palm estates in Peninsular Malaysia were mainly converted from rubber plantations.
- Oil palm hectarage has grown at a compound growth rate of 5.9% from 1975 to 2007.
- Planted Area by region:
  - 55% - Peninsular Malaysia
  - 45% - East Malaysia
- Planted area by ownership:
  - 60% - Private estates
  - 29% - Government schemes (e.g. FELDA)
  - 7% - State schemes
  - 11% - Smallholders

While oil palm planting expansion in Peninsular Malaysia is likely to plateau, Sabah & Sarawak has been mooted for further expansion outlined in the Industrial Master Plan 2 (1996).

The FELDA Story

Poverty Eradication
- Concept adopted:
  - Government agencies were set up (FELDA, FELCRA and RISDA) to allow plantation developed land to be distributed to the landless poor.
  - Management expertise from the government was used to run the organised smallholdings.

The FELDA story
- Involvement with oil palm began in 1961 with an initial area of 375 ha.
  - Today planted oil palm hectarage stands at 722,946 ha.
  - 250 settlement schemes incorporating 95,000 families
- Selection criteria
  - Age bracket of 21-50 years, married and physically fit
- Key success factors:
  - Highly centralised administration and management
  - Through FELDA’s integrated business operations along the palm oil value chain, FELDA provides support services to settlers ranging from basic community infrastructure to financing, processing & marketing.
  - Settlers only given subsistence payment until the first crop harvest
  - Settlers entitled to same sale prices of the produce as private estates
- Three stage development package:
  - Settlers given individual titles
  - Settlers manage small blocks of land
  - Encourage self-reliance
  - Co-operative system
  - Prepare settlers with know-how

FELDA’s success story has tied the prosperity of rural Malaysia with the palm oil industry. Today it is the largest plantation player with 723k ha planted area.

Source: MPOB website, FELDA website
Private Sector

- The private sector in the palm oil industry today consists mostly of integrated players with plantation estates and refineries.
- There are currently 41 plantation companies listed in Bursa Malaysia.
- However, there are also diversified and private unlisted companies participating in the palm oil industry.
- Sime Darby is currently the world’s largest listed plantation player by planted area (~530k ha),
  - Contributing 6% of world CPO production.
  - Market capitalisation of RM41bn

<table>
<thead>
<tr>
<th>As at 18 June 2009</th>
<th>Main Board</th>
<th>Second Board</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Plantation Companies</td>
<td>38</td>
<td>3</td>
<td>41</td>
</tr>
<tr>
<td>Market Capitalisation (RM bn)</td>
<td>71.7</td>
<td>0.6</td>
<td>72.3</td>
</tr>
</tbody>
</table>

- Current Malaysian plantation PE ratios range from 10x-17x
- Today, most Malaysian private companies have expanded their coverage beyond the Malaysian border, owning plantation estates and running destination refineries overseas.
- The private sector has also played a role in developing smallholder plantations.
  - E.g. Native Customary Rights (NCR) plantation development in Sarawak
  - Private sector contribute up to 60% of capital; providing funding & management expertise
  - Smallholders contribute land and workforce
- The private sector has also acknowledge the importance of R&D and infrastructure development in the palm oil industry.

Key Drivers of the Malaysian Palm Oil Sector

Government Policies in Malaysia

Import Substitution
Before 1970s

- Revenue from export tax of CPO
  - Purpose of maintenance and development of infrastructure
- Financial incentives for palm oil refining
  - 40% abatement of corporate income tax for 2 years
  - 7 year tax holidays for pioneer status refineries
- Introduced duty differences between CPO and processed palm oil
  - To stimulate palm oil processing activities in the country
  - Avoid overburdening CPO producers
  - Protect duty revenue as much as possible
  - Avoid providing financial support from other sources
- Subsequently tax credits were focused to stimulate further downstream processing (fractionated products, cooking oil, margarine, vanaspati & shortening)

Success of Malaysian downstream industry attributed to:
- Big processors coordinated easily with MITI
- Major palm oil processors were also oil palm cultivators
- Strong support from MITI1, SIRIM2, MPOPC3, PORLA4 & PORIM5

Since the 1960s, the Malaysian Government policies have moved from import substitution initiatives to export-oriented diversification detailed in the Industrial Malaysia Plan

1. MITI – Ministry of International Trade & Industry
2. SIRIM – Standards & Industrial Research Institute of Malaysia
3. MPOPC – Malaysian Palm Oil Producers Council
4. PORLA – Palm Oil Registration & Licensing Authority
5. PORIM – Palm Oil Research Institute Malaysia
### Key Drivers of the Malaysian Palm Oil Sector

#### Government Policies in Malaysia

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Human Resources</strong></td>
<td>• Training institutes, universities</td>
<td>• Training focused on downstream products</td>
</tr>
<tr>
<td></td>
<td>• On the job training</td>
<td>• Training of R&amp;D personnel</td>
</tr>
<tr>
<td><strong>Technology</strong></td>
<td>• Adapt process and R&amp;D technology from PORIM</td>
<td>• Localisation of machinery &amp; equipment production</td>
</tr>
<tr>
<td></td>
<td>• Local fabrication</td>
<td>• Reduce downtime and costs from freight and exchange rate fluctuations</td>
</tr>
<tr>
<td><strong>Infrastructure</strong></td>
<td>• Rationalisation of palm oil refining and fractionation</td>
<td>• Expansion of bulking, onshore pumping, storage and handling facilities in East Malaysia</td>
</tr>
<tr>
<td></td>
<td>• To increase efficiency and competitiveness in world markets</td>
<td></td>
</tr>
<tr>
<td><strong>Tax &amp; regulatory agencies</strong></td>
<td>• Government incentives</td>
<td>• Market coordinated incentives</td>
</tr>
<tr>
<td></td>
<td>• Double deduction tax benefit on export sales</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Export tax on CPO to reduce supplies to destination refineries in Europe</td>
<td></td>
</tr>
</tbody>
</table>

The support for the palm oil industry outlined under the IMP emphasised on supply security and development of different segments in the downstream value chain.

### Key Drivers of the Malaysian Palm Oil Sector

#### Network Cohesion Between the Government and Private Sector

<table>
<thead>
<tr>
<th>Government</th>
<th>Industry Associations</th>
<th>Smallholders/Govt Schemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Create vital institutions, MPOB and MPOC for coordination with:</td>
<td>• Provide ex-ante discussions between captains of industry and government officials</td>
<td>• Plantation owners</td>
</tr>
<tr>
<td></td>
<td>• Universities for research</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• MITI for promotion of international trade</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Private sector for smooth informational flows</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>R&amp;D Collaborations</th>
<th>Policy Implementation (Examples)</th>
<th>Promotional &amp; Marketing Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Research undertaken by universities (local &amp; abroad)</td>
<td>• Replanting subsidies</td>
<td>• Coordinated trade policies</td>
</tr>
<tr>
<td></td>
<td>• Grants from government</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Joint support and commercialisation by private sector</td>
<td></td>
</tr>
</tbody>
</table>

Trust and systematic coordination between the government and associations of planters, processors and manufacturers have provided a smooth development and flow of industry information.

---

1. MPOA - Malaysian Palm Oil Association
2. PORAM - Palm Oil Refiners Association Malaysia
3. MOSTA - Malaysian Oil Scientists and Technologist Association
Key Drivers of the Malaysian Palm Oil Sector

Skills and Knowledge Developed By The Malaysian Palm Oil Players

Upstream

- Major plantation companies today ensure implementation of best estate practices:
  - Engage experienced estate managers as plantation advisors
  - Developed Agricultural Research Manual (ARM) as reference for planters
- Skills training for harvesters
- Introduction of mechanisation to reduce labour dependencies
- Development of standard mill operating procedures
  - Minimise oil losses
  - Minimise machinery breakdown

Downstream processing

- Prior to the 1970s, palm oil refineries were mostly located in Europe.
  - Palm oil refiners initially acquired machinery & equipment from suppliers at arms-length transactions
- Subsequently Malaysian companies have since acquired destination refineries in Europe (e.g. Sime Darby and IOI)
  - PORIM (subsequently MPOB) have spearheaded process improvement technology
  - Today, most machinery & equipment are produced and fabricated locally
  - Reduces downtime and costs exposure to freight and exchange rate fluctuations

Infrastructure development and integration from upstream to downstream was possible due to economies of scale built up by local palm oil players and stable geopolitical conditions

Key Drivers of the Malaysian Palm Oil Sector

Research & Development

Breeding

- In 1960, Malaysian Department of Agriculture established exchange program with West African economies and 4 private plantations to set up the Oil Palm Genetics Laboratory
- Under the second IMP, calls were focused on mass tissue culture and genetic engineering to improve planting material quality

Education

- Establishment of an agriculture-focused education institution - Universiti Putra Malaysia
  - To train agricultural and agro-industrial engineers and agro-business graduates to conduct research in the field
- Set up of training academies by private sector (e.g. Sime Darby Academy) to provide on-the-job training.

Agencies

- Set up of PORIM (subsequently MPOB) to undertake R&D support
  - Conduct training on chemistry, quality, analytical techniques, processing operations, transportation and handling of palm oil products
  - Under IMP, role expanded to include training and R&D in oleochemicals, specialty fats and processed palm kernel oil

Palm oil R&D efforts in Malaysia have seen an increase in value added and new product development breakthroughs

1. IMP - Industrial Malaysia Plan
2. PORIM - Palm Oil Research Institute Malaysia (established in 1979)
3. MPOB - Malaysian Palm Oil Board (merger of PORIM and Palm Oil Registration & Licensing Authority - PORLA)
Malaysia & Indonesia Palm Oil Industry Comparisons

### Institutional support

<table>
<thead>
<tr>
<th>Malaysia</th>
<th>Indonesia</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Policy Formulation</td>
<td>- Directorate General of Estate Crops</td>
</tr>
<tr>
<td>- Research</td>
<td>- Indonesian Oil Palm Research Institute (IOPRI)</td>
</tr>
<tr>
<td>- Associations</td>
<td>- Gabungan Pengusaha Kelapa Sawit Indonesia (GAPKI)</td>
</tr>
<tr>
<td>- Malaysian Palm Oil Association (MPOA)</td>
<td>- Assosiasi Minyak Makan Indonesia (AIMMI)</td>
</tr>
<tr>
<td>- Palm Oil Refiners Association (PORAM)</td>
<td></td>
</tr>
</tbody>
</table>

Relative to Malaysia, representation of the palm oil industry in Indonesia was seen to be fragmented. Research efforts in Indonesia were focused on expansion of oil palm area rather than product innovation.

### Type of Policies Implemented

- **Export Oriented interventions**
  - Resulted in deliberate export shift from CPO to refined products
  - Motivated product development
  - Encouraged competition & market efficiency

- **Import substitution interventions**
  - Stabilise domestic price of cooking oil
  - Focused on upstream area expansion to increase CPO production
  - Less successful in creating dynamic environment to encourage forward linkages
  - Encouraged rent seeking

Malaysia pursued a more proactive policy to drive learning & innovation through key instruments of agencies, funding, network coordination. Lack of such instruments has largely restricted Indonesia to cultivation and processing to meet domestic demand.

### Issues & Responses

#### Current Issues

- Maintain Malaysia’s position as a leading palm oil producer
  - Landbank expansion limitations
  - Efforts to improve operational efficiency and productivity
- Susceptibility to price fluctuations
- Environmental/Sustainability concerns on: Oil palm plantation expansion (especially East Malaysia)
  - Allegations of open burning, planting on peat soil, endangering orang utan habitats

#### Policy levers/Responses

- Productivity enhancement efforts through:
  - Estate practices
  - Mill practices
  - R&D to produce high yielding planting materials
- Existing government policies
  - Replanting subsidies
  - Reduce supply for mature trees to give way to new plantings
  - Palm biodiesel mandate, B5 in government transportation
- Ensure RSPO compliance by plantation estates
  - Subsidies to smallholders to obtain RSPO certification
- Government policies on land conversion
  - Oil palm in Malaysia can only be planted on idle land or designated agriculture land
- Private sector and government agencies should highlight existing sustainable practices:
  - Zero-burning replanting technique
  - Biological control in weed control, pest control
  - Highlight policies on planting on peat soil conditions
## Issues & Responses

<table>
<thead>
<tr>
<th>Current Issues</th>
<th>Policy levers/ Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer misconceptions on palm oil especially in new markets e.g. China, Eastern Europe</td>
<td>Private sector cooperation with government agencies (e.g. MPOB, MPOC, MITI) to market and dispel misconceptions about palm oil</td>
</tr>
<tr>
<td>Low quality oil</td>
<td>Joint cooperation with renowned universities or R&amp;D entities to publish reports on benefits of palm oil products</td>
</tr>
<tr>
<td>Unhealthy</td>
<td></td>
</tr>
</tbody>
</table>

## Conclusion

- Malaysia today has become a leading palm oil hub of trade and knowledge.
  - The palm oil industry is a profitable business that provides opportunities to diversify into food and non-food products.
  - The industry has been resilient, withstanding several economic recessions over the past century.
- However, this is subjected to several pre-requisites:
  - Suitable soil and agronomic conditions
  - Good infrastructure support in place
  - Availability of good planting material
  - Knowledge in plantation management and best practices
  - Integration with modern milling and mechanisation processes
  - Marketing capabilities & Quality control
  - Access to R&D competencies for sustained development
- Network cohesion and sharing of information flow are also key between:
  - Government and plantation sector
  - Government to government
  - Plantation sector and stakeholders
- Unlike other industries, benefits from the palm oil industry will only be reaped years later. We have to be passionate:
  - ~3 years for commercial harvesting of new plantings
  - Minimum payback of upstream greenfield investment ~6-7 years
  - The economic cycle for upstream investment ~ 25 years
  - ~2 years for a mill or even a refinery to begin operations