Sustainability and Responsible Production of Malaysian Palm Oil – Sime Darby’s Perspective

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Oil Palm - Facts

- Oil palm is the **most efficient** oilseed crop in the world.
- One hectare of oil palm plantation is able to produce up to **10** times more oil than other leading oilseed crops.
- The most efficient producers of palm oil may achieve yields as high as **8** tonnes per hectare.
- Average lifespan of a oil palm tree is about **25** years.

**Average Oil Yield (t/ha/year)**

Source: Oil World Annual 2013
Overview of the Malaysia Palm Oil Industry 2013

- Currently one of the largest producers & exporters of palm oil & palm oil products.
- Accounts for 39% of world production & 44% of world export.
- Oil palm cultivation in 2013: 5.23 million ha.
- Palm oil (crude) production in 2013: 19.22 million tones.
- Export revenue of palm products in 2013: RM 61.36 billion
- Malaysia palm oil exported to more than 150 countries.

- It is also a forerunner in sustainable palm oil development.

- The plantation’s upstream activities strictly adhere to industry-proven best practices, which were developed through a century of research and development.

- Major plantation companies make a conscious and concerted effort towards the conservation and protection of environment, the rehabilitation of forests, the protection of wildlife and the well-being of communities within and around its operations.
ABOUT SIME DARBY
Malaysia-based multinational conglomerate.

One of Malaysia’s largest listed companies in terms of market capitalisation – RM57.93 billion as at 2 July 2014.

Involved in 5 core businesses – **Plantation, Industrial, Motors, Property, and Energy & Utilities.**

Operations span more than 25 countries employing more than 100,000 people worldwide.
World’s largest listed palm oil producer - accounting for more than **2.4 million MT** of crude palm oil (CPO) or **5% of total global annual output**.

Two third or more than 2.0 million MT of its total production is certified sustainable. It is now the largest producer of sustainable palm oil in the world.

**Upstream** total planted hectarage:
- Malaysia - 319,431 hectares
- Indonesia – 204,446 hectares
- Liberia – 10,142 hectares (63-year concession to develop 220,000 hectares)
MAJOR MILESTONES:
OUR SUSTAINABILITY JOURNEY
Sime Darby Plantation
Leading in Plantation Sustainability

1985
Introduced Zero burning

1985
Elected to UNEP Global 500 Roll of Honour for commercialisation of zero burning practice

1990
Biological control for IPM

1992
Elected to UNEP Global 500 Roll of Honour for commercialisation of zero burning practice

1992
Founding member of RSPO

1994
EMS – ISO 14001

2002
Founding member of RSPO

2002
First GlobalGAP certification

2004
First RSPO certification

2008
First certification of SCCS and ISCC

2010
Arguably, SDP is the Leader in Plantation Sustainability.

We pioneered the Zero Burning Policy since the Eighties.
We are also one of the founding members of RSPO.
We are the largest producer of CSPO – Malaysia 100% & Indonesia 92% certified.
Zero Deforestation of primary & virgin forest.
No New Peat Development.
Enduring commitment to Environmental & Social Principles – HCV & FPIC

2012 and beyond
Largest producer of certified sustainable palm oil, leading total sustainable production, food safety, CSR, and GHG reduction.
Sime Darby Plantation Policies on Sustainability

1. Occupational, Safety and Health Policy
2. Environment and Biodiversity Policy
3. Food Safety Policy
4. Quality Policy
5. Slope and River Protection Policy
6. Gender Policy
7. Social Policy
8. Child Protection Policy
9. Lean Six Sigma Policy
10. Save the Orang Utan Policy
11. Carbon Reduction Policy (in progress)
Our Sustainable Practice:

- Land use & management
- Zero burning replanting technique
- IPM
- Water management
- Soil conservation practices
- Palm oil mill co-products utilization
- Social wellbeing of our people
- R&D
- CSR
Our Sustainable Practices

• The industry’s best standards in plantation processes are developed over centuries and perfected through a combination of experience and R&D.

• Sime Darby Plantation observes best agro-management practices in all field operations worldwide.

• Full compliance to RSPO’s Principles & Criteria.

• Stringent safety and health programme.
Our Sustainable Practices

Land Use & Management

- It is a standard practice in SD to conduct SEIA & HCV assessment before any new land development.

- Through the assessments, sensitive areas that are preserved include:
  - natural forests within the estates
  - wetland areas
  - river and riparian boundaries
  - water catchments and effluent pond areas
  - marginal soil areas
  - areas with slopes of more than 25 degrees gradient

- Land development will only start after Free, Prior and Informed Consent (FPIC) has been obtained from local communities.

- Apart from Sime Darby Plantation’s own internal policies, the FPIC guidelines under the New Planting Procedures (NPP) of the RSPO and Article 32 of UN Declaration on the Rights of Indigenous Peoples are observed.

- At replanting, natural forest cover on hill slopes of more than 25º is retained, and riparian reserves and buffer zones are maintained.
Our Sustainable Practices

- Zero Burning Replanting Technique

  - The economic life cycle of an oil palm tree is between 25 to 30 years. Beyond that age, oil palm yields are no longer economical as the palm can attain heights of up to 25 metres, making harvesting of Fresh Fruit Bunches (FFB) difficult. At the end of each life cycle, old trees are felled to make way for replanting.

  - Zero burning technique was first introduced commercially in 1985 by Sime Darby Plantation. Through legislation, the zero burning replanting technique has since become compulsory for all oil palm replanting in Malaysia.

  - SD was awarded the **UNEP Global 500 Award** during the Rio Earth Summit in 1992 for outstanding achievement in protection & improvement of the environment.

  - This technique allows all plant tissues to be recycled, enhancing soil organic matter, invariably helping to restore and improve soil fertility.
Integrated Pest Management (IPM)

- SD’s IPM effort plays an important role in keeping production numbers up.
- IPM is also in line with our sustainability drive because it relies on the use of natural predators instead of being dependent on chemicals.
- IPM encompasses cultural, physical and bio-control methods to suppress pest levels to below economic threshold.
- Since the early 80’s, intensified research into IPM has yielded encouraging results in the control of major pests and diseases in oil palm:

  I. **Rodent pests** using barn owl (*Tyto alba*)
II. **Left eating caterpillars** by planting of beneficial plants to encourage the population of natural predators.

III. **Rhinoceros beetles** by establishment of leguminous cover crops (LCC) to cover the breeding sites and trapping of adult beetles using pheromone traps.
IV. Basal stem rot caused by the *Ganoderma* fungus (disease) through cultural practice with completely removal of boles, and shredding trunks and crowns of the oil palm trees to reduce the viability of *Ganoderma* inoculums in zero burning replants.

The use of *Arbuscular mycorrhizal* fungi (AMF) which is antagonistic to *Ganoderma* as the bio-control agent is being studied currently.
Our Sustainable Practices

Water Management

• Water management is a very important aspect of oil palm cultivation.

• The principle of effective water management is to maintain the water table at the optimal level for as long as possible through proper drainage, irrigation and water retention.

• This is done to ensure that the oil palm tree’s yield potential is always optimized.

• For coastal estates, bunds are constructed to prevent floodwater from entering the estates during the period of high rainfall. Optimal water levels are maintained through a system of water gates and flood pumps.
Our Sustainable Practices

Soil Conservation Practices

• Soil conservation practices include construction of terraces on undulating and hilly terrain, stacking of oil palm pruned fronds and the establishment of Legume Cover Crops (LCC) on the terrace fringes.

• This minimizes the velocity of the water flowing down the slopes, resulting in higher water retention.
Our Sustainable Practices

❖ Palm Oil Mill Co-products Utilization

• The two main co-products are Empty Fruit Bunches (EFB) & Palm Oil Mill Effluent (POME).

• Both are rich in nutrient and organic matters.

• EFB are being recycled back to the fields as mulch.

• POME can be applied to oil palm fields too, after being treated to bring its Biological Oxygen Demand (BOD) level within the permissible level for land application.

• Research works have shown both can substitute the inorganic fertilizers and promote better yields in oil palm.
Social Wellbeing of Our People

- SD values all of its employees and strives to provide a workplace where aspects such as social welfare, employee safety and talent development are continuously improved.
- This ties in with our commitment of having a sustainable business, and in this respect the ultimate aim is to create a safe conducive working environment and opportunities for all.
- The local population of estates & surrounding communities are given priority for any employment opportunities.
- Social amenities i.e. medical services, schools, places of worships, playgrounds etc. are extended to the surrounding population where appropriate.
- Collaboration with social NGO, we have developed Gender Policy & Child Protection Policy.
- The **Gender Policy** serves to safeguard women’s rights with regards to their reproductive health, working conditions, domestic violence, sexual harassment, safety & security, housing & basic amenities, wages, gender-based discrimination & child care.
- The **Child Protection Policy** is to protect children’s rights which categorically prohibit hiring of child labour.
Our Sustainable Practices

Research & Development

- Sime Darby put strong emphasis on R&D with a scientist strength of 250 and total employee complement of 1,700.

- Three R&D Centres and three Innovation Centres, and several labs to support the entire value chain from producing oil palm seeds to the production of consumer products like cooking oil, margarine & ghee.

- SDP has made considerable contributions in developing and pioneering best management practices in the oil palm industry and in many instances, assisted in commercializing them.

- Today, SDP is proud to be one of the pioneers in successfully sequencing, assembled and annotated the oil palm genome. With this breakthrough the company stands on the brink of discovering a ‘super palm’ that will revolutionize the industry.

- R&D continue to remain the focal point for growth within the palm oil industry. It has become critically important to raise productivity on existing land area given our diminishing amount of available land in Malaysia and rising cost of production.
Our Sustainable Practices

Corporate Social Responsibility (CSR)

Sime Darby’s spectrum of responsibility ranges from the purely operational and financial at one end to the social and altruistic at the other. Together, these elements do towards fulfilling Sime Darby’s CSR objectives.

Sime Darby CSR Spectrum™
Sime Darby through Yayasan Sime Darby has committed more than RM 90 million for a period of 10 years in pursuit of our aim to become the leader and catalyst in environmental conservation initiative in Malaysia.
The RM 750,000 project over a span of 2-year period for the hornbill conservation is a partnership between SDP and Malaysian Nature Society (MNS). Belum Temenggor Forest hubs a total of 10 species of hornbill, and the conservation of the globally threatened Plain-pouched hornbill is the main focal.

The objective of this partnership between Sime Darby Plantation and Sabah Forestry Department is to enhance Bio-diversity conservation, habitat of flora and fauna in the area which has the highest concentration of orangutan in Borneo and with an ultimate outlook in re-creating the habitats for Orang Utan and other wildlife at large.

In 2008, SDP has committed to plant 1 million indigenous Endangered, Rare and Threatened (ERT) forest tree species. A total of 329,225 trees comprising of 276 types of Endangered, Rare and Threatened species had been planted in the Sime Darby Estates.
The post HCV Assessment for Indonesia, Kalimantan Tengah area was conducted from June – November 2009 for the assessment of High Conservation Value area within Sime Darby Plantation boundaries throughout Indonesia plantations.

Sime Darby Plantation has committed to set aside areas with High Conservation values across its plantation in Malaysia, Indonesia and Liberia.

Collaboration with WWF Malaysia to survey areas adjacent to our plantation boundaries on the existence of tigers habitats to protect their habitat and survival.

The Sustainable Island Programme (SIP) is fully sponsored by SDP since 2008 with the partnership of Reef Check Malaysia and WildAsia. This project has aligned its Responsible Tourism Awards checklist with the first global standards called the Sustainable Tourism Criteria, which were launched by the Rainforest Alliance, the United Nations Environment Programme (UNEP), the United Nations Foundation, and United Nation’s World Tourism Organisation (UNWTO) at the World Conservation Congress in October 2008.

Tiger Project

Biodiversity Enhancement and Conservation

Reef Monitoring
CERTIFICATION & COMPLIANCE
• In response to the urgent and pressing global call for sustainably produced palm oil, the Roundtable on Sustainable Palm Oil (RSPO) was formed in 2004 with the objective of promoting the growth and use of sustainable oil palm products through credible global standards and engagement of stakeholders.

• Sime Darby is one of the **founding members**.

• RSPO has 8 principles & 39 criteria and national specific indicators. The standard aims to ensure that:

  ✓ No primary forests or other HCV areas are cleared for new oil palm plantations.
  ✓ That oil palm plantations minimise their environmental footprint.
  ✓ That the basic rights of local owners & farm workers and indigenous people are fully respected.
RSPO Certifications

- To date, **100%** of Sime Darby Plantation’s Strategic Operating Units (SOU) in Malaysia & 92% in Indonesia have been certified by RSPO and accounting for a total annual production of more than 2.0 million MT of sustainable palm oil.

- We are now the **largest** producer of Certified Sustainable Palm Oil (CSPO) in the world.

- To ensure the traceability of our products throughout the supply chain, Sime Darby has also implemented the RSPO Supply Chain Certification System (SCCS) which describes requirements related to the control of RSPO certified oil palm products along the supply chain, including flow of material and associated claims.

Other certifications obtained:

- International Sustainability & Carbon Certification (ISCC).
- QMS (ISO 9001:2008)
- EMS (ISO 14001:2004)
- OSH (OHSAS 1800:2007)
- HACCP (MS 1480:2007)
CARBON EMISSION REDUCTION INITIATIVES
Carbon Emission Reduction Strategy

- Sime Darby Plantation has embarked on a plan to cut its carbon emissions by 25% by 2016 and 40% by 2020.

- Carbon Reduction Strategy cuts across Sime Darby Plantation’s value chain and endows the management with a defined path enabling the Company to deliver commitments on carbon reduction.

- A comprehensive master plan outlining emission reduction strategies within a definite period will allow the management to focus on precise areas and plan the resources to meet the desired target.

- The major contributor of Greenhouse Gas (GHG) emissions in upstream production of crude palm oil (CPO) is methane. The release of methane occurs mainly at palm oil mill effluent treatment plants.

- Methane abatement can be implemented either through biogas trapping during anaerobic digestion of POME or avoidance through aerobic processes, as in composting.

- Both are proven to play significant role in meeting the desired target.
Carbon Emission Reduction Strategy

Methane Entrapment - Biogas

- Trapping biogas for power generation or combustion is an efficient way of avoiding methane release into the atmosphere.
- Utilization of biogas for power generation is one of the main components of Sime Darby Plantation’s drive to reduce carbon emissions.
- Where possible, electricity generated through biogas is fed back to the electricity grid, for which the company earns revenue.
- Other possibilities include co-firing with other mill waste such as fibre and shells to increase energy self-sufficiency, and flaring to reduce methane release.
- Today, 11 biogas plants are in progress.
- Target is to build biogas plants in all mills by 2020.
Carbon Emission Reduction Strategy

- **Methane Avoidance - Composting**
  - The two largest constituents of mill waste are effluent (POME) and empty fruit bunches (EFB). By combining these two waste products, compost can be produced.
  - Compost is applied in estates as a soil conditioner as well as a replacement for inorganic fertilizer.
  - Sime Darby Plantation began piloting composting as a mill waste management initiative in 2007 with 4 open-system composting plants.
  - Today we have 22 closed composting plants where all operations are done under a roofed yard for better control of process and environmentally safe.
THE WAY FORWARD
The Way Forward

- Sime Darby Plantation supports the goal of developing a **sustainable** palm oil and rubber industry.

- Having pioneered many best agro-management and sustainability practices, the Company will continue to **spearhead** other new initiatives to support the Malaysian Government to make its palm oil the most Responsible, Safe and High Quality in the world.

- Backed by more than 400 years of collective experience in plantation management, Sime Darby Plantation is geared towards differentiating its upstream operations and rationalising and extending its downstream activities. The company is always looking for ways to improve overall performance and profitability, whilst ensuring sustainability is strongly **embedded** in its palm oil value chain.

- Acknowledging that maintaining a leading position in the industry will present many challenges, Sime Darby Plantation’s strategies for expansion and growth in its upstream operations will focus on productivity-driven initiatives while the future expansion of the downstream business will be driven by niche marketing, technology-advancement and innovative R&D.

- In driving for the desired results, the company promotes a **performance-driven culture** with clear and transparent accountability among its employees.
Thank You