

WHERE LIES THE FUTURE FOR MALAYSIAN PALM OIL AND RUBBER INDUSTRIES ?



M P O C

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Presentation

Part 1: Palm oil

Part 2: Rubber

- i. Prospects
- ii. Opportunities
- iii. Challenges
- iv. Solutions
- v. Conclusions

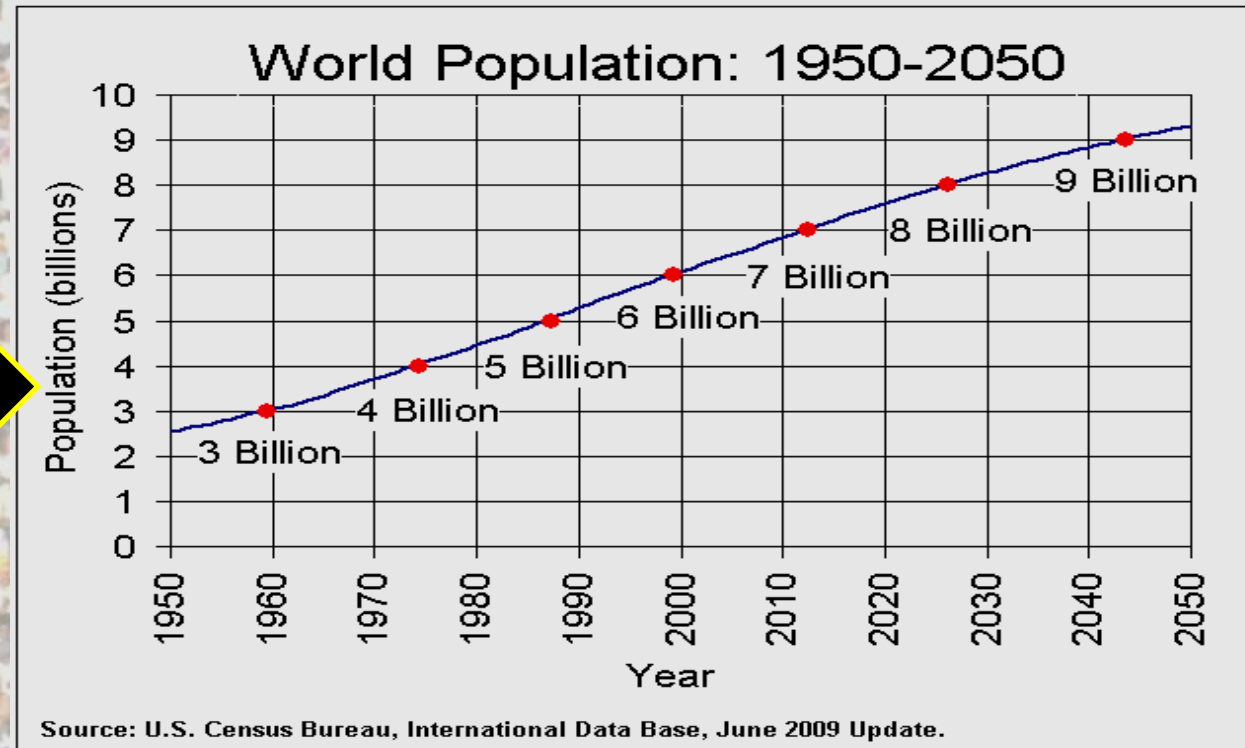
PROSPECTS FOR PALM OIL



Ever Growing World Population Results in More Mouths to Feed

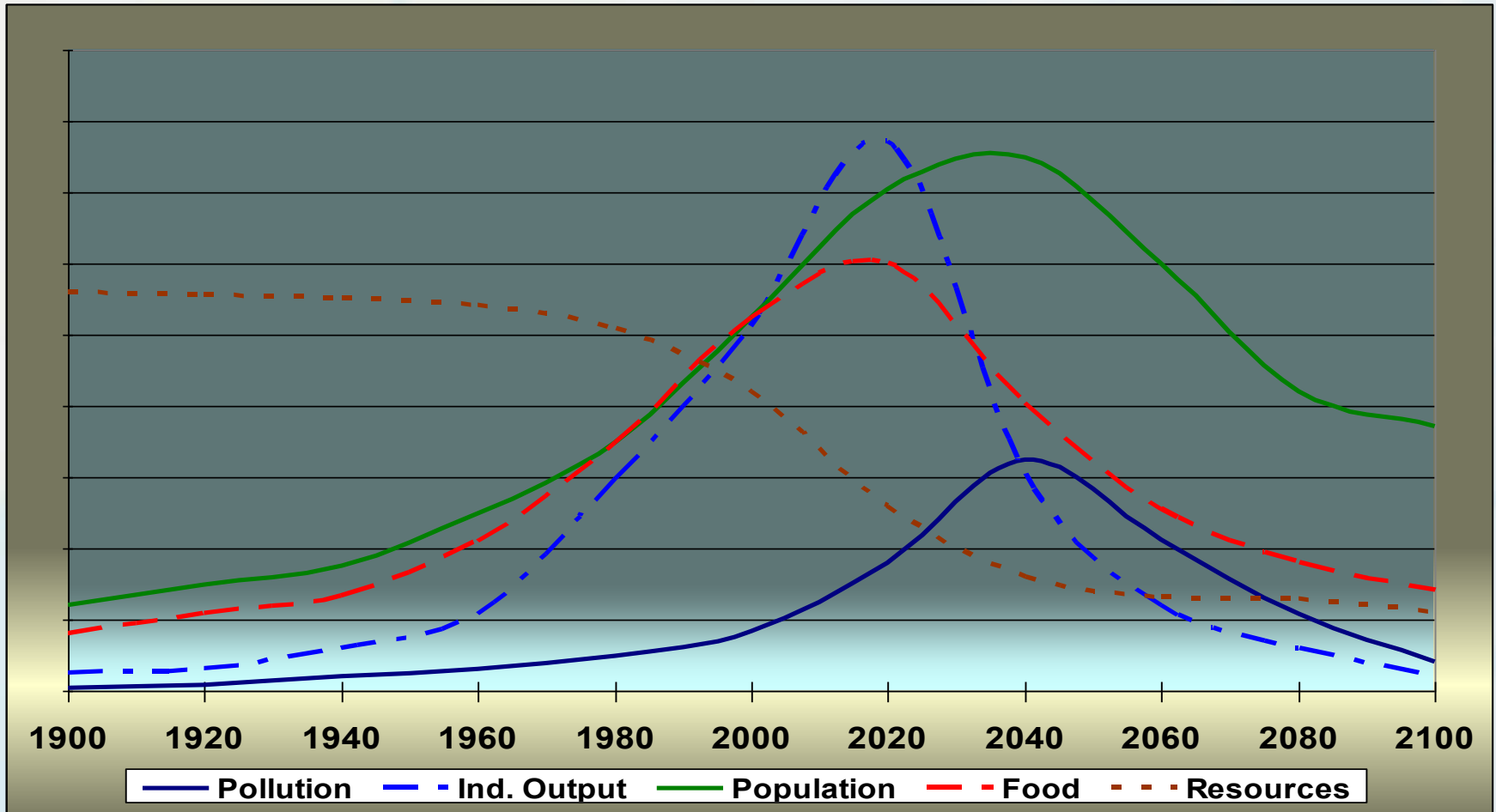
Future of palm oil is driven by growth in demand for food, oleochemicals and bio fuel due to population and economic growth

World Population: 1950-2050



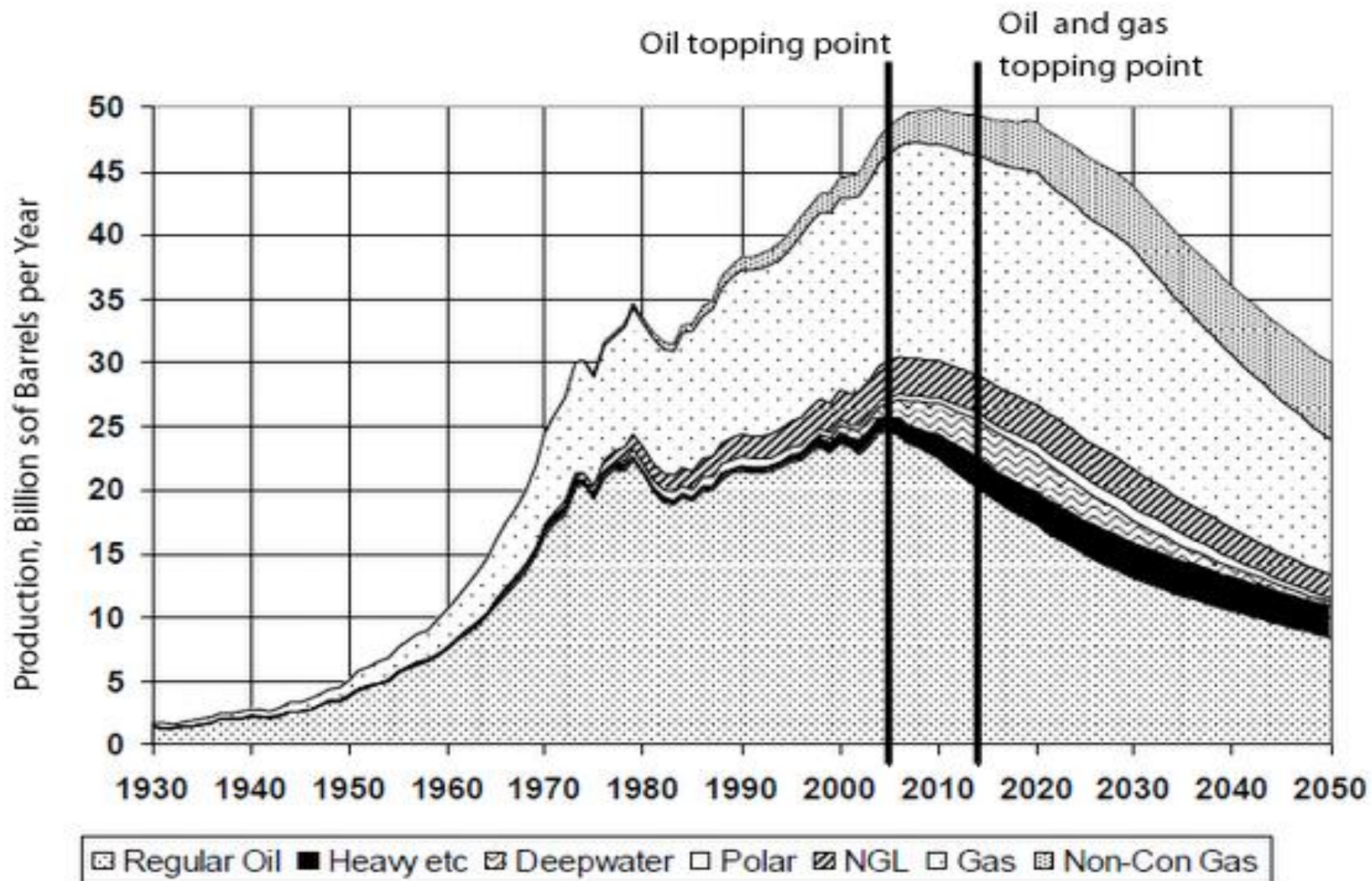
The world population is projected to grow from 7 billion in 2011 to 9 billion by 2043, an increase of 29 percent. Food production must meet this rate of increase.

THE BASIC LIMITS TO GROWTH MODEL



- Exponential growth causes reduction of resources & pollution increase.
- This will force reversal of growth.
- If industry can resist the decline, high prices due to shortages may occur.

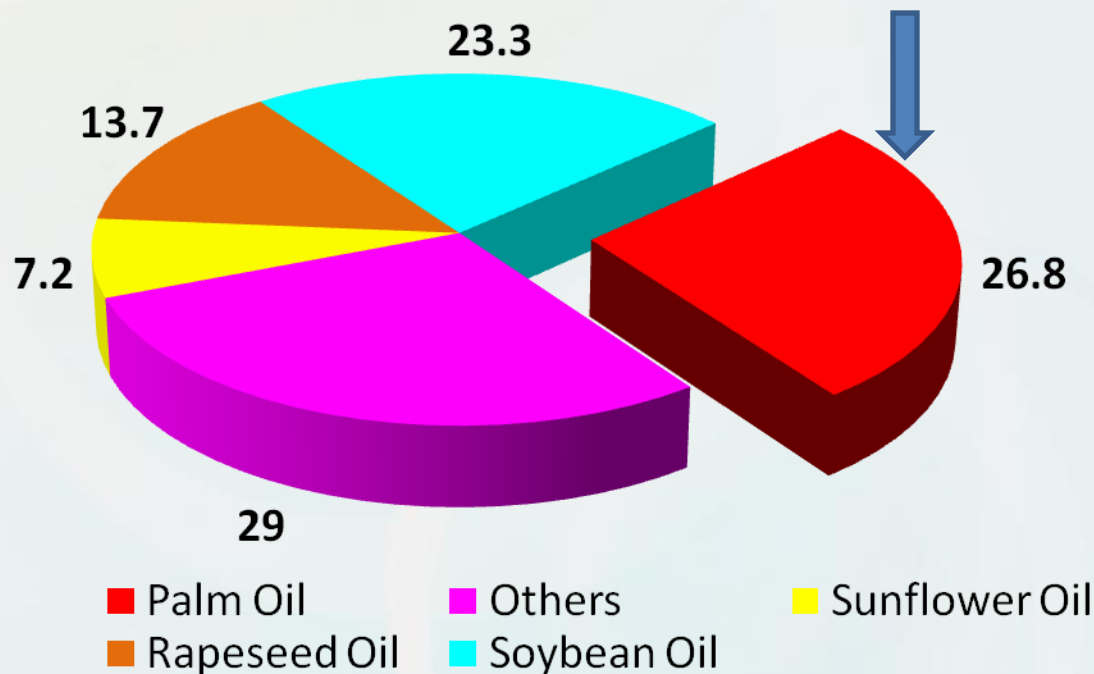
ASPO depletion curves for all oil and gas



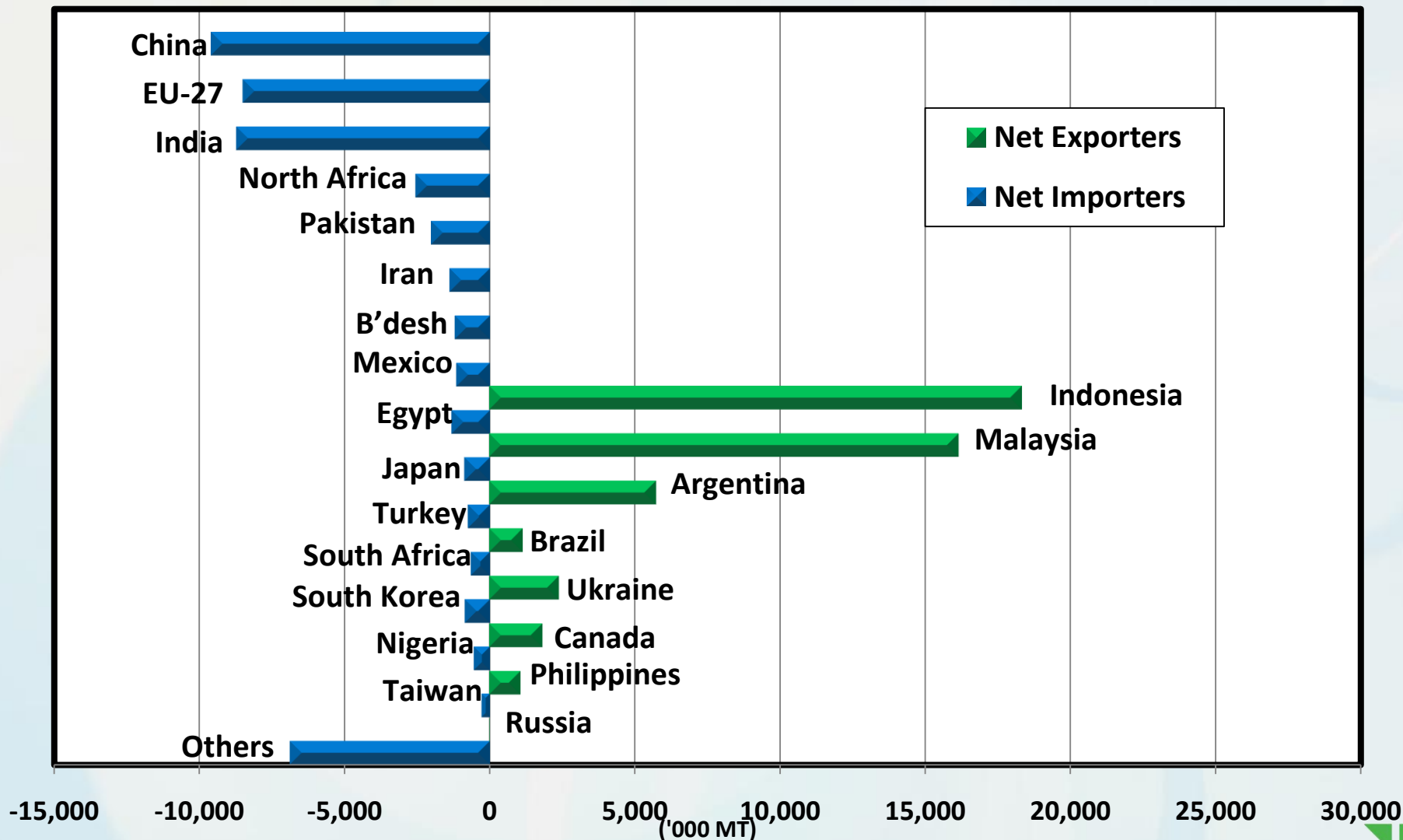
IMPORTANCE OF PALM OIL & ITS DERIVATIVES

1. **Source of food (global food security):** 80%
2. **Oleochemicals:** 15%
3. **Biofuel :** 2%
4. **Renewable energy source:** *Potential Remains Largely Untapped through Palm Biomass*

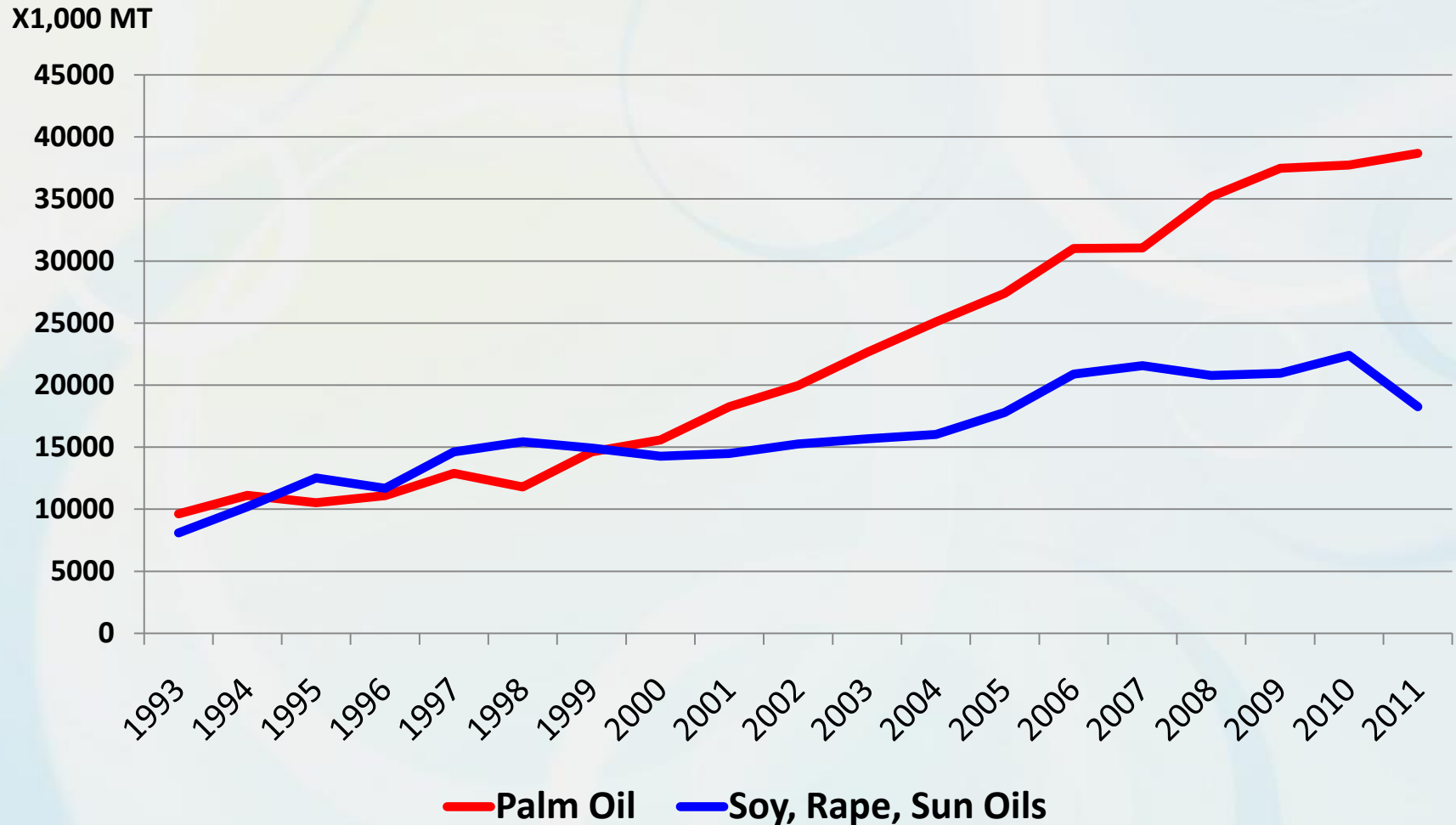
Palm Oil Currently Accounts for 27% of Global Oils & Fats Supply



Net Importing & Exporting Countries for Oils and Fats (2011)



World's growing dependence on palm oil will boost demand further into the future



Source: Oil World

PALM OIL AS BIOFUEL



MALAYSIA:

- **Implementing B5 policy**

GLOBALLY:

- **Countries implementing biofuel programs**
e.g. EU & US

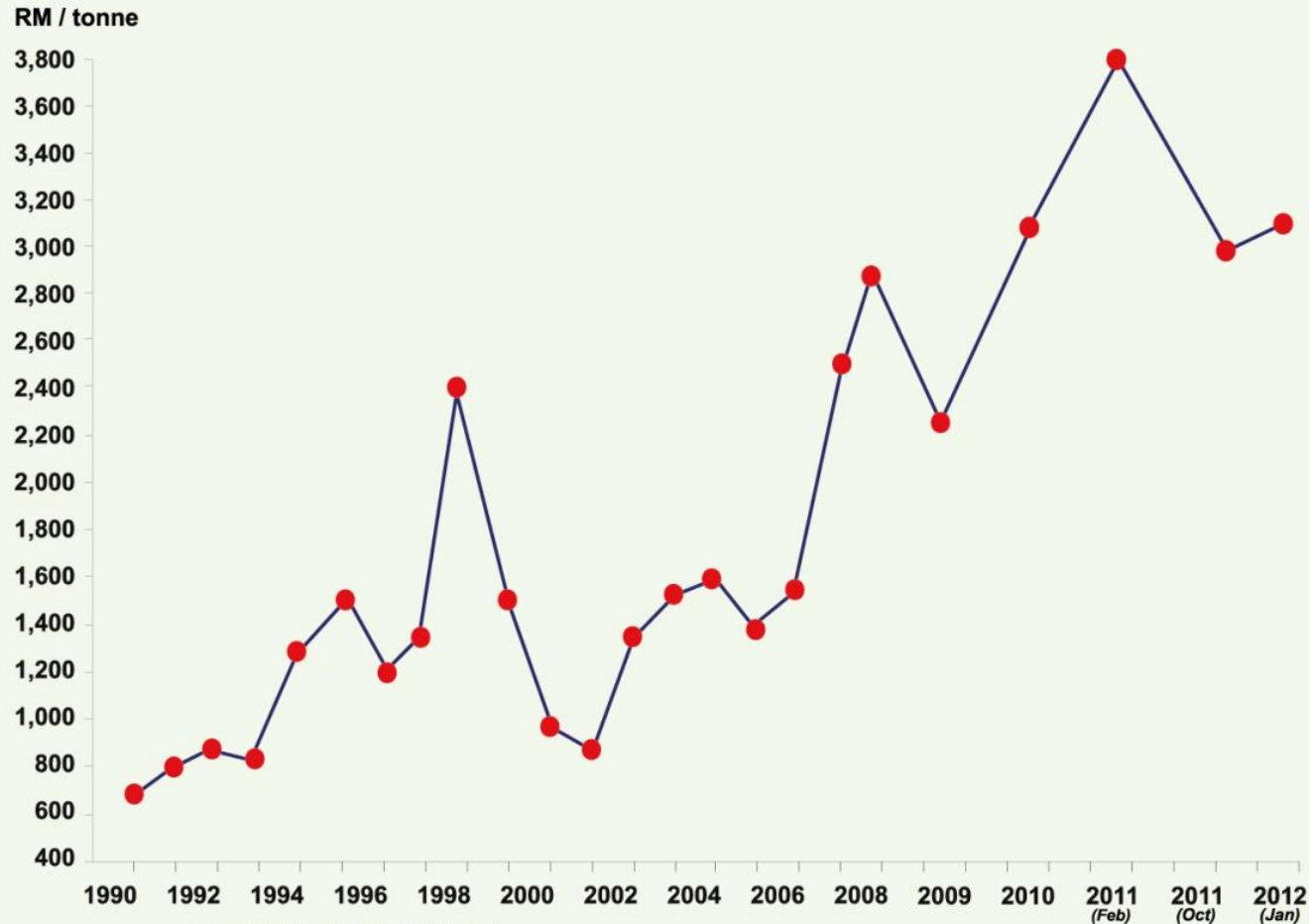
PROJECTED WORLD REQUIREMENTS FOR FOOD & BIOFUELS (M tonnes)

Source	2015	2030
Food	147.2	160.7
Biofuels*	57	102
TOTAL	204.2	262.7

Source: * Legge (2008)

Price of CPO is high

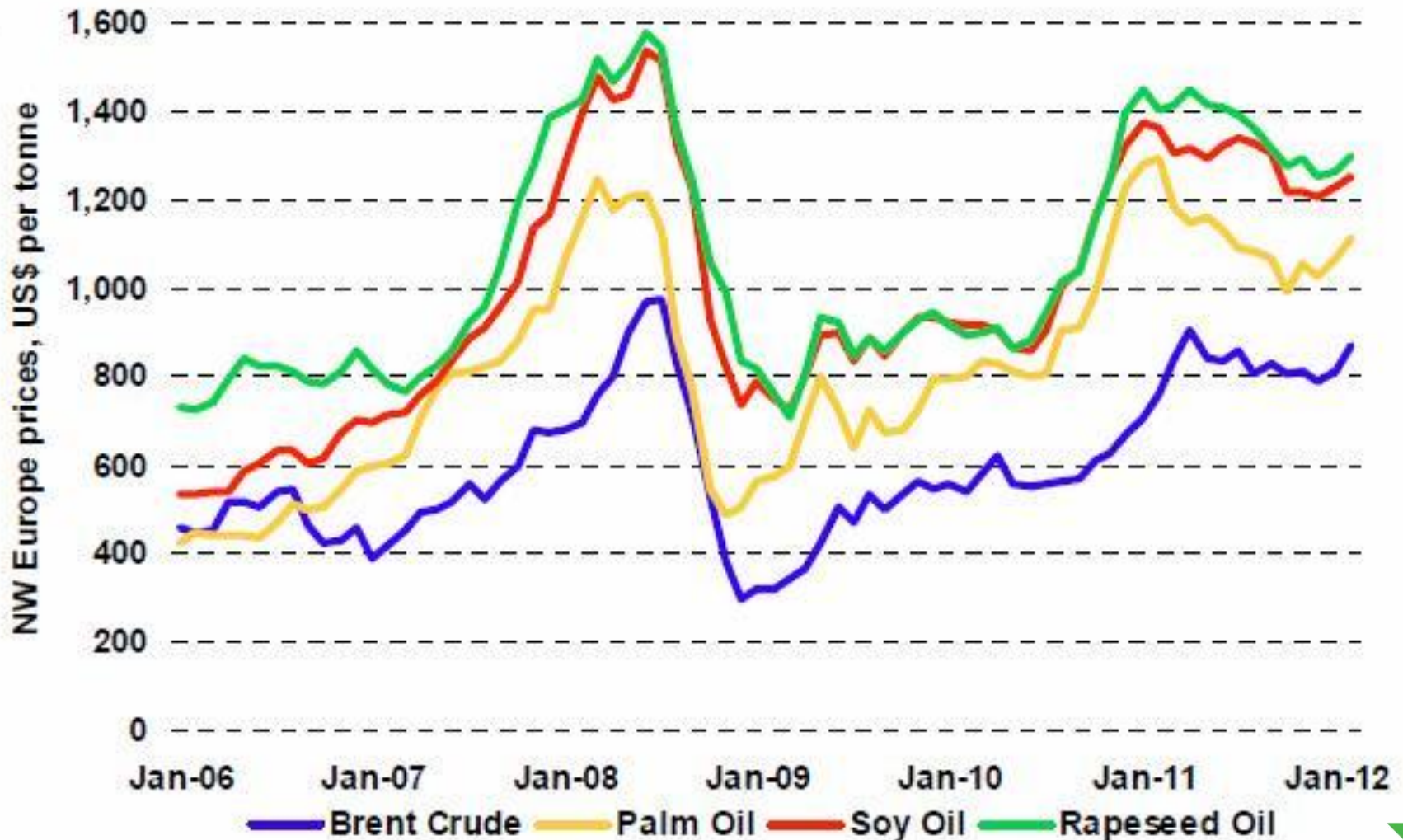
ANNUAL AVERAGE PRICES OF CPO IN PENINSULAR MALAYSIA (1990 - Jan 2012)



Malaysian Palm Oil.

A gift from nature. A gift for life.

Prices of vegetable oils trade higher relative to petroleum & they follow similar price trend



Source : James Fry (LMC International)

CHALLENGES TO TRADE

- 1) Deforestation**
- 2) Orang utan**
- 3) Trade protectionism in countries implementing biofuel policy**

DEFORESTATION

- **Deforestation allegations against palm oil by western NGOs.**
- **A developing country needs to develop, especially its land, just like developed countries. Sustainable agriculture should be redefined to mean that a country has 33 % of its land as permanent forest.**
- **Arbitrary cut-off date for no deforestation is a blockade to development especially for food security and improved income for the developing countries.**
- **Irony: developed countries with less forest have used the no deforestation claim to justify their soya and rapeseed as sustainable biofuel, while Malaysia with large tracts of forest is disqualified from participating in the biofuel market because of the cut off date for no deforestation. Penalized for late development**

Malaysia's deforestation rate is lowest

Forest area & deforestation rate in selected countries (1990-2010)

Country	Forest area (Million ha)			Deforestation (Million ha)	
	2000	2005	2010	2000-2005	2005-2010
Year	2000	2005	2010	2000-2005	2005-2010
Australia	154.92	153.92	149.30	1.0	4.62
Indonesia	99.41	97.86	94.43	1.55	3.43
Argentina	31.86	30.60	29.40	1.26	1.20
Malaysia	21.59	20.89	20.46	0.70	0.43



Source: FAO Global Forest Resources Assessment (2010)

- Malaysia would not deforest unnecessarily and will continue to use land judiciously
- Committed to Rio Summit pledge – to maintain at least 50% of total land area under forest

Comparison of land area needed by other crops to substitute Malaysian palm oil

Year	2025	2043	2083
Additional palm oil to be supplied by Malaysia (m tonnes)	2.7	5.3	7.7
Additional land needed for palm oil cultivation in Malaysia (m ha)	0.7	1.4	2.1
Additional land needed to cultivate rapeseed to offset oil palm cultivation in Malaysia (m ha)	4.5	9.0	13.4
Additional land needed to cultivate sunflower to offset oil palm cultivation in Malaysia (m ha)	5.7	11.3	17.0
Additional land needed to cultivate soyabean to offset oil palm cultivation in Malaysia (m ha)	7.2	14.4	21.6

- 6-10 times more land needed if other oil crops were to substitute Malaysian palm oil to meet future demand.
- 21.6 m ha of land needed for soyabean cultivation is equivalent to 2/3 of land area of Malaysia.

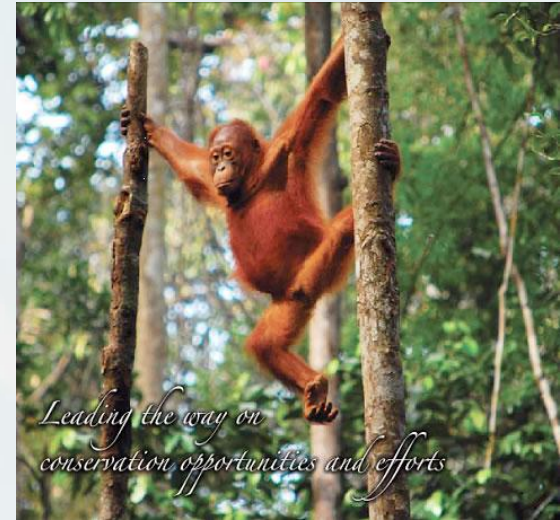
Oil palm occupies small percentage of world agricultural land in 2011

Land Use Type	Total Area (million ha)	As % of Area
Total world agricultural land	4900	100
Soyabean *	104.2	2.13
Rapeseed *	33.0	0.67
Sunflower *	24.4	0.50
Oil Palm *	14.4	0.29 ***
Coconut *	9.7	0.20
Other Oil Seeds *	68.1	1.39
Malaysian Oil Palm	5.0	0.10

Source: *Oil World

Orang utan conservation

- A 33% permanent forest definition for sustainability may be sufficient for meeting the conservation needs of the orang utans and other wildlife. This appears as the NORM practised in developed countries.
- Oil palm cultivation also provides a food source for animals which is an added advantage.
- Over production of animals (crowding) has to be managed by culling as done in developed countries.
- Land is needed to produce food and raw materials for over populated metros in Calcutta, Bombay, Cairo and many more where human tragedies due to food shortages are the norm, and priority should be given to help them.



UNFAIR TRADE BARRIERS TO PALM OIL BIOFUEL VIA DISTORTING SCIENCE

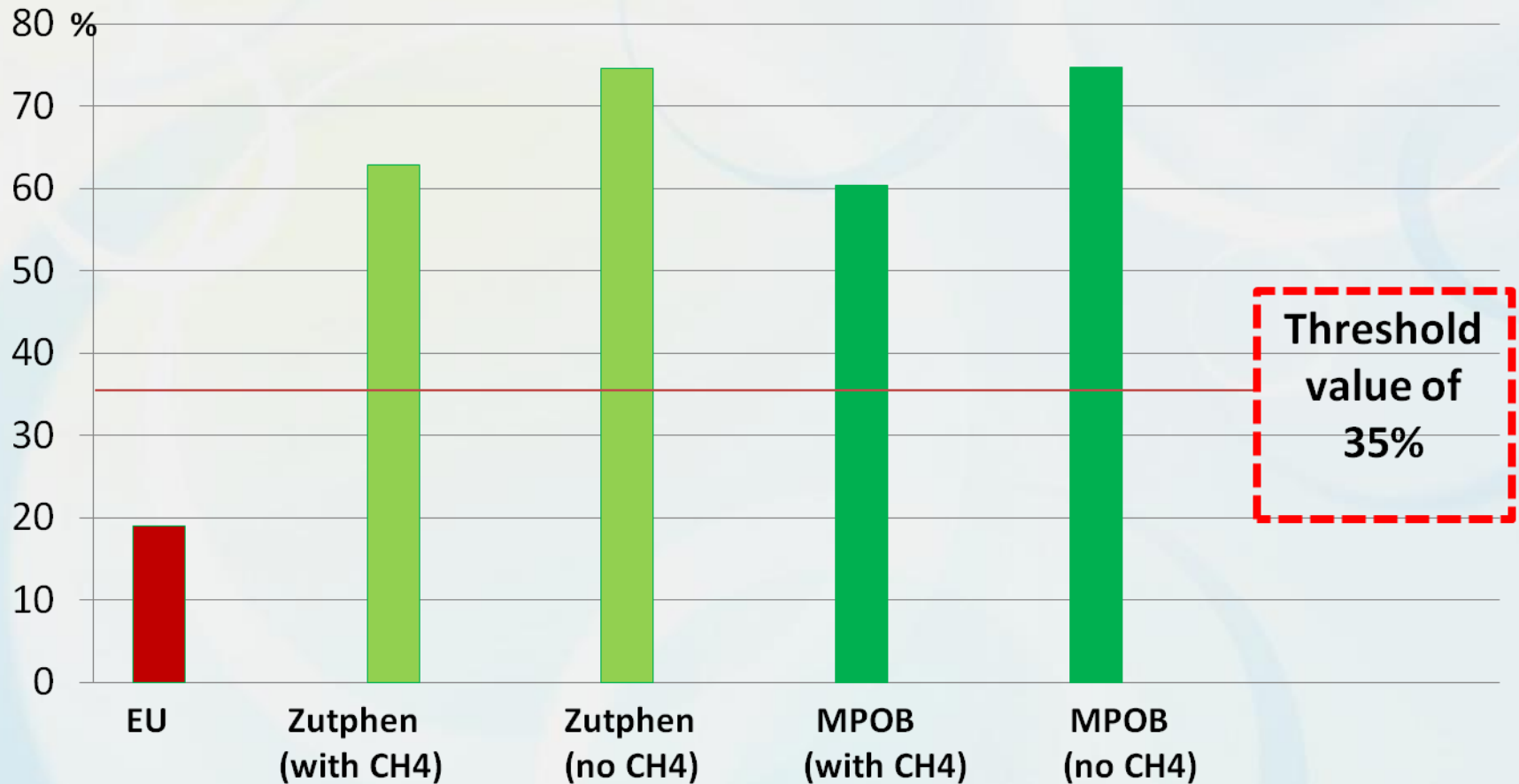
EPA's LCA GHG emissions for palm oil biodiesel (kg CO₂/mmBtu)

Fuel Type	Palm oil biodiesel	2005 Diesel base
Net agriculture (w/o land use change)	5	
Land use change, Mean	46	
Fuel production	25	18
Fuel & feedstock transport	4	*
Tailpipe emissions	1	79
Total emissions	80	97
LCA GHG% reduction compared to petroleum baseline	17% (38-101%)*	

*** MPOC's re-evaluation shows % reduction is much above threshold value of 20%**

EU Directive

GHG emission reduction for palm oil biodiesel



INDONESIAN EXPORT TAX NEW & OLD STRUCTURE FOR JAN. 2012

	New Structure* (%)	Old Structure (%)
CPO	15	12.5
RBD Palm Olein	7	12.5
RBD Palm Oil	5	11
RBD Palm Stearin	5	7.5
Biofuel	2	2

Source : Indonesia's Ministry Of Decree No. 67/PMK/2010

NEW TAX STRUCTURE SUPPORTS MORE REFINING

- Indonesia's refineries operated at 66.8%-69.2% of capacity between 2009-2010. The refinery capacity is stagnant as there is no incentive for refiners to expand capacity since difference in duty between CPO and refined palm oil is low in the old tax structure. This new tax structure with wider duty differences between crude and refined palm oil will encourage more refining.

Refining capacity and utilization (%)

	2009	2010
Total Refining Capacity	15,300,000	15,300,000
Production	10,596,800	10,230,000
Utilization rate (%)	69.2%	66.80%

Source : Department of Industry of Indonesia, 2010

MALAYSIA'S CPO EXPORT TAX

Malaysia's CPO export tax is computed on graduated scale

Schedule of CPO Export Duty For The Period From 27th Dec. 2011 to 2nd Jan, 2012

Crude Palm Oil	
The first RM 650.00 per tonne	Nil
The next RM 50.00 per tonne	10%
The next RM 50.00 per tonne	15%
The next RM 50.00 per tonne	20%
The next RM 50.00 per tonne	25%
The balance	30%

Source : MPOB

- Malaysian CPO exporters have to pay an export duty of RM865.80 per MT of CPO exported at the gazetted price of CPO for the calculation of export duties between 27th Dec. 2011 - 2nd Jan 2012 ; CPO price was RM3,619.54 per MT
- Based on the tax paid for CPO export, it effectively converts to a tax rate of 27.9% based on the current BMD price of RM3,100.
- All other palm products except CPO are duty free.
- Malaysian CPO tax discourages CPO export but targets to make available sufficient CPO for refineries.

CHALLENGES TO PRODUCTION IN PALM OIL INDUSTRY

- **Well taken care of by National Key Economic Areas for Oil Palm**
- **EPP1: Accelerating replanting & new planting**
Issue: 400,000ha > 25 years drag down national average yield
- **EPP2: Improving FFB yield**
Issue: National FFB yield stagnate at 20 t/ha & independent smallholders < 17t/ha
- **EPP3: Improver worker's productivity**
Issue: Labour shortage & need to mechanize

National Key Economic Areas for Oil Palm

- **EPP4: Improve oil extraction rate**

Issue: Inconsistent quality of FFB delivered to mills & some mills with high oil loss of FFB at 1.8%

- **EPP5: Develop biogas facilities**

Issue: opportunity loss from unutilized CH₄ gas during milling

- **EPP6: Focus on high value oleo chemicals**

Issue: 99% Malaysian production is basic oleochemicals

National Key Economic Areas for Oil Palm (cont)

- **EPP7:Commercialising 2nd Generation Biofuels**

Opportunity:

- 1) EFB fibre & shell accounts for 74% of biomass
- 2) Bio oil to be converted into transportation fuels

- **EPP8:Expediate growth in food & health based segment**

Issue: Slow growth in these segments & SMEs having ingredient formulation may not have financial means

WASTE TO WEALTH IN PALM BIOMASS

Palm Biomass Briquettes

- Treated EFB can be used as a raw material for the production of palm based biomass briquettes



100% Pulverized EFB
(PEFB)

Pulverized EFB + sawdust
(PEFB+SD) (50:50)

EFB Fibre + sawdust
(FEFB+SD) (50:50)

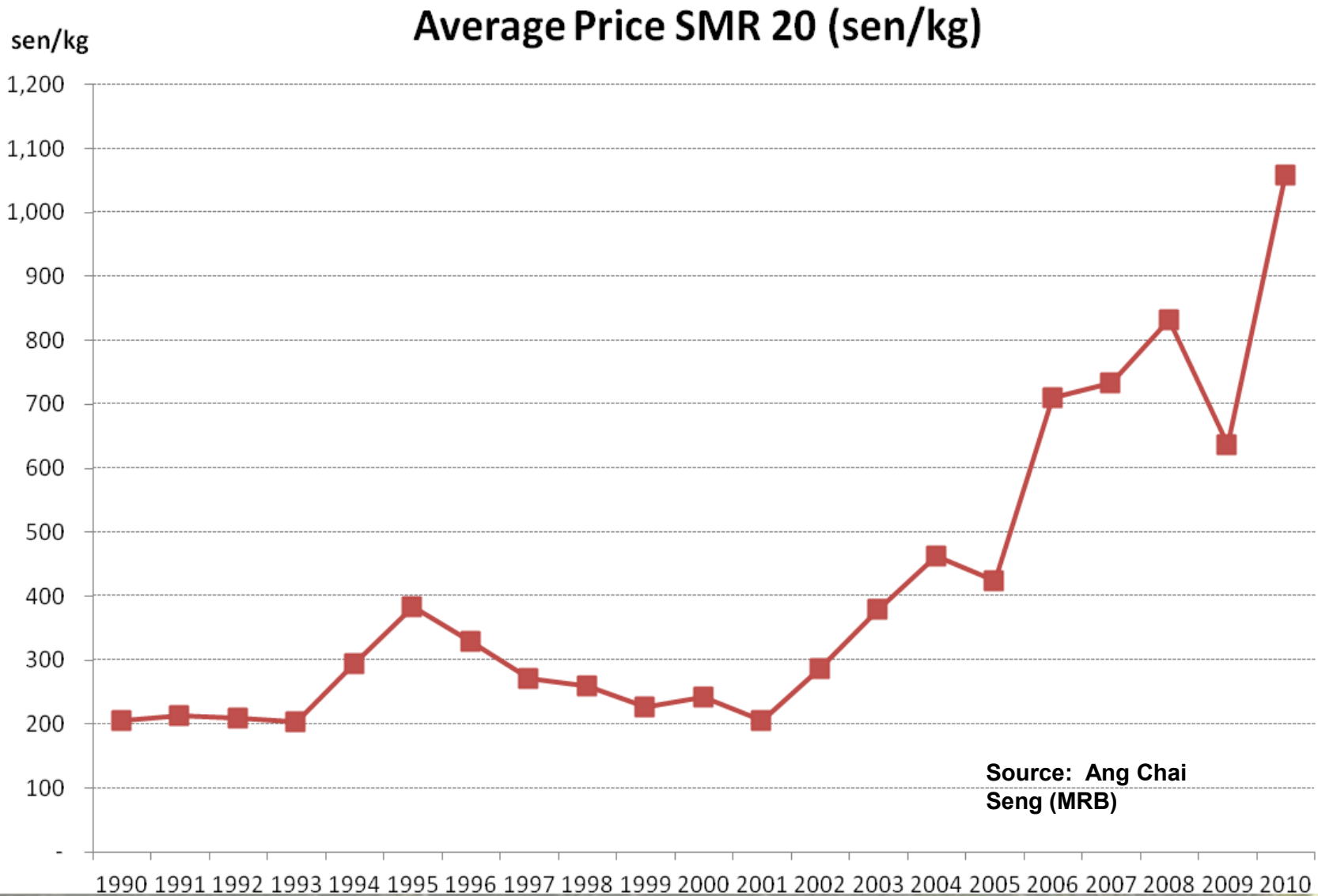
- As a substitute raw material for commercial sawdust briquette industry
- Made either from 100% palm biomass or mixed with sawdust

BIG POTENTIAL IN PALM WOOD FURNITURE

Latest Furniture Fair in Malaysia total confirmed/potential sales = RM 7.5m



PROSPECTS FOR RUBBER

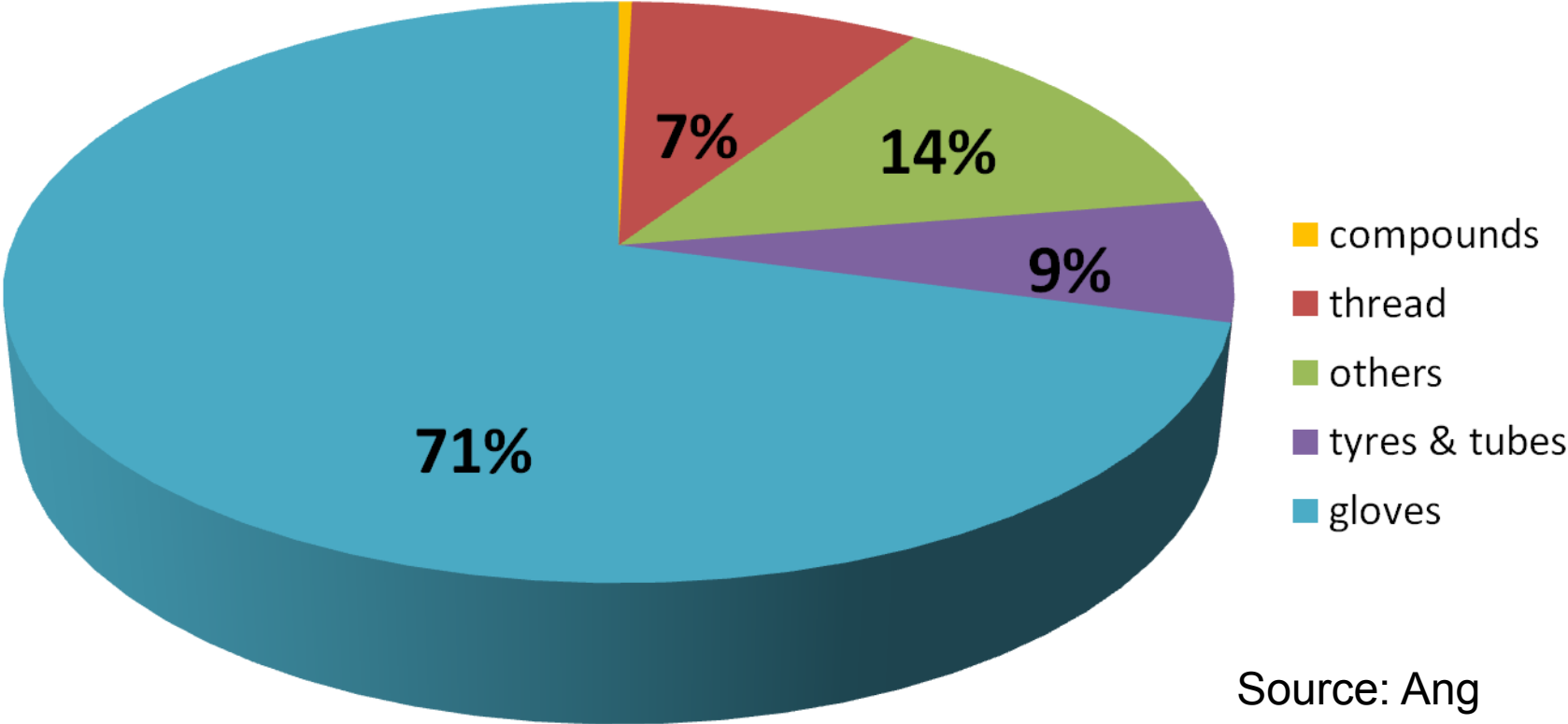


Some quick facts about Malaysian rubber industry

	2010	2011
Planted area (ha)	1,020,380	1,022,780*
Production (tonnes)	939,241	996,210
Average yield (kg/ha/yr)	1,480	1,500
Earnings (Exports + rubberwood furniture)	RM33.85b	RM40.42b*
Contribution to Malaysia's economy	2 nd position after palm oil	
NR producer	3 rd in world	
NR exporter	3 rd in world	
Rubber gloves	World's largest supplier	
Latex thread & cord	World's 2 nd largest supplier	
Nitrile butadiene rubber	World's largest supplier	

* Estimated Source : Ang Chai Seng (MRB)

Malaysia's NR consumption by sectors (Dec 2011)



Source: Ang
C.S. (MRB)

Economic Transformation Programme for rubber

- **Project 1: Stabilise rubber area & improve yield**

- Expand rubber plantations in Sabah & Sarawak by 20,000ha per year
- Convert 80% of marginal & idle land to rubber plantations by 2020
- Exploit high yielding clones to reach 1.8t/ha/yr
- Ensure output sufficient for downstream segment
- Reduce foreign labour dependency by 5%

Economic Transformation Programme (cont)

- **Project 2: Accelerating growth of downstream products**
 - Grow SMR & latex product revenues by 7% over next 10 years
 - Grow tyre revenues by 10% per year
 - Grow other product revenues by 6% over next 10 years by
 - Increasing production of specialty rubber & value added products
 - Reducing processing cost by 30%
 - Increasing global market share of all types of rubber gloves by 10% annually
 - Increase local workers participation by 5% annually

Economic Transformation Programme (cont)

- **Project 3: Introducing new rubber products**

Generate new revenue at a growth rate of 7% per year by introducing new products i.e. diversify & expand dry rubber products to increase export revenue to RM 5b by 2020

Achievements of Economic Transformation Programme

PALM OIL INDUSTRY shows good achievement as of Dec 2011

- Replanting & new planting 81% achievement
- 100 Tunas officers employed
- 15 co-operatives formed
- RM 1,000 discount to encourage use of Cantas & damond blade sharpeners
- OER improved to 21.05% from 19.70%
- 48 biogas plants built
- 5 bio oil plants that use biomass as feedstocks to be built

Achievements of Economic Transformation Programme

RUBBER INDUSTRY shows good progress of Dec 2011

- Budwood centres in Pananpang (Sabah), Similajau (sarawak), Bukit Kuantan (Pahang), Sg Sari (Kedah) and Kota Tinggi (Johor)
- Inspection of 84 nurseries to eliminate rogue clones carried out
- Reported that both industries together achieved 98% of KPIs set

What will be the scenario in the future with such good demand for palm oil & rubber?

1) More plantings

- Better soils used to grow oil palm, poorer ones for rubber
- Malaysian companies will go abroad due to lack of land & local labour in Malaysia

2) Large demand for personnel

- At all levels: Managers, supervisors, agronomists, engineers, field & factory workers
- Shortage of competent personnel felt at all levels
- Shortage felt more in rubber than oil palm industries

What will be the scenario in the future with such good demand for palm oil & rubber?

3) Big demand for planting materials

- Shortage of planting materials
- Situation more critical for rubber as rubber seeds are in short supply

4) Success is variable

- Companies with no knowledge on plantation crops also acquiring plantations
- Success depends on ability to tackle issues in 1,2,3

Concluding remarks

- Prospects for palm oil is very rosy particularly for food
- There is big potential to use palm biomass (Weath from Waste)
- Growing need to stimulate the palm wood furniture industry
- Prospects for rubber is also very good
- Both palm oil and rubber demand may be dampened due to pallid world economic conditions
- There are issues to be tackled for both the industries so that they can contribute and meet their roles in transforming Malaysia from middle to high income status
- Entry Point Projects (EPPs) in Economic Transformation Programmes will help to address these issues
- The KPIs must be monitored to ensure success
- Both crops will play very significant pivotal roles in Malaysia's Economic Transformation Programmes
- Malaysian companies going abroad to plant oil palm & rubber
- Success will be variable

THANK YOU

