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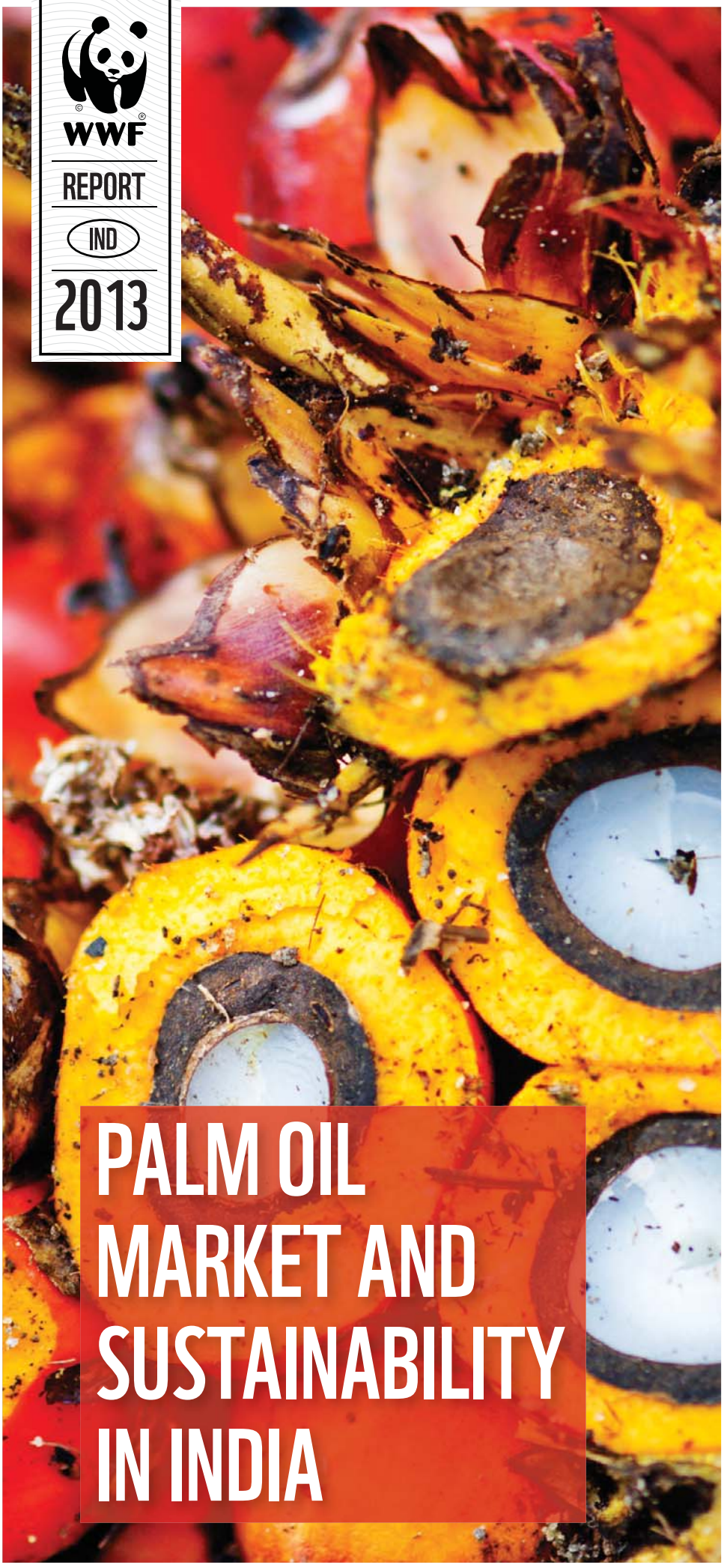

PALM OIL MARKET AND SUSTAINABILITY IN INDIA

The publication is a part of WWF's Market Transformation Initiative. The report aims to spread awareness regarding palm oil, its economic, social and environmental implications and market trends towards sustainable production and consumption of palm oil.

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Report is prepared by WWF-India and KPMG

WWF-India Team
Bhavna Prasad,
Director – Sustainable Business
Kadambari Yadav,
Programme Officer – Sustainable Business

KPMG
Food and Agriculture Team

Report developed and edited by
Neha Simlai,
Manager – Communications,
Sustainable Business

CONTENTS

TABLE OF ACRONYMS

ASEAN -	Association of South-East Asian Nations
Bn -	Billion
CAGR -	Compound Annual Growth Rate
CPO -	Crude Palm Oil
CPKO -	Crude Palm Kernel Oil
CSPO -	Certified Sustainable Palm Oil
CVD -	Counterveilling Duties
FAO -	Food and Agricultural Organisation
FMCG -	Fast Moving Consumer Goods
GDP -	Gross Domestic Product
GMO -	Genetically Modified Organisms
GHG -	Greenhouse Gases
HVOC -	Hindustan Vegetable Oil Corporation
ISOPOM -	Integrated Scheme of Oilseeds, Pulses, Oil Palm and Maize
KLK -	Kuals Lumpur Kepong Berhad
MHa -	Million Hectares
MMTC -	Metals and Minerals Trading Corporation
Mn -	Million
Mn MT -	Million Metric Tonnes
MT -	Metric Tonnes
NAFED -	National Agriculture Cooperative Marketing Federation of India
OGL -	Open General License
OPAE -	Oil Palm Area Expansion
OPDP -	Oil Palm Development Program
PAN AP -	Pesticides Action Network- Asia and Pacific
PDS -	Public Distribution System
PFAD -	Palm Fatty Acid Distillate
RBD -	Refined Bleached Deodorized
RSPO -	Roundtable on Sustainable Palm Oil
SAD -	Special Additional Duty
STC -	The State Trading Corporation of India
TFA -	Trans Fatty Acids
TMOP -	Technology Mission on Oilseeds and Pulses
USDA -	United States Department of Agriculture
UT -	Union Territory
WTO -	World Trade Organisation

FOREWORD

"*Biodiversity is the foundation of life on earth and one of the pillars of sustainable development.*" Ban Ki moon

According to the WWF's Living Planet Report 2012, demand on natural resources has doubled since 1966 and we are currently using the equivalent of 1.5 planets to support our activities. "Business as usual" projections estimate that we will need the equivalent of two planets, by 2030, to meet our annual demands. Under this scenario, humanities resource requirements will become increasingly difficult to meet.

In order to reverse this unsustainable trend, there is a need for a paradigm shift in our economic and business models and lifestyles that decouple human development from unsustainable consumption (moving away from material and energy-intensive commodities), to maintain ecosystem integrity, and to promote pro-poor growth and development.

One example of consumption of natural resources, resulting in large scale deforestation and loss of biodiversity, is the production of unsustainable palm oil in countries like Indonesia and Malaysia, and increasingly in Africa. India is the largest consumer and importer of palm oil in the world today, with a majority of its imports coming from Indonesia.

The report, 'Palm Oil Market and Sustainability in India, provides a comprehensive overview of the palm oil market and the sustainability trends that are driving it towards toward responsible production and consumption. The report underscores the negative environmental impacts of the unsustainable palm oil plantations and initiatives underway to address these issues, to enable production of sustainable palm oil.

Jamshyd Godrej

When forests shrink, so does the home of endangered species

EXECUTIVE SUMMARY

Palm oil has emerged as the main global source of vegetable oil due to adequate availability, versatility in usage and lower cost, as compared to other vegetable oils. Palm oil forms ~ 33% of the world vegetable oil production mix. Indonesia and Malaysia contribute almost 87% of production of palm oil, whereas China and India constitute 34% of imports.[1]

Global edible oil consumption has grown from 123 Million Metric tonnes (Mn MT) in 2007 to 158 Mn MT in 2012.[2] This growth has been fuelled by increased population, incomes and per capita consumption especially in developing countries like India, Indonesia and China among others of emerging nations like India, Indonesia, China and other developing countries. Palm oil, at 48.7 Mn MT is the largest consumed edible oil in the world.[3]

As demand for palm oil increases, substantial tracts of tropical forests are often cleared to make room for large plantations. As per WWF's estimates, the expansion of oil palm plantations is likely to cause four million hectares (more than twice the size of Kerala) of forest loss by 2020. Deforestation would most likely occur in high biodiversity areas, such as Borneo, Papua New Guinea, Sumatra and the Congo Basin in Africa. The felling and burning of forests impact populations of endangered wildlife such as Sumatran Tigers, Rhinos and Orangutans. It also has adverse impacts on people's health and disrupts local livelihoods. At the global level, the impacts of forest loss are even more dramatic, including the release of greenhouse gases into the atmosphere that contribute to global warming.

To ensure an uninterrupted supply of 'clean' palm oil that does not involve sacrificing the remaining tropical forests or contributing to global warming, all companies that produce, trade or use palm oil need to move towards sustainable palm oil.

India's Palm oil consumption, as a part of the over all global consumption has increased from 13% in 2007 to 15% in 2011-12. India's growth in consumption is outpacing the global rate and hence India plays a vital role in driving the production of Palm oil globally.

The purpose of this report is to provide an overview of the palm oil market and highlight the need to procure sustainable palm oil in India. This report includes the rationale and development of sustainability platforms, such as the Roundtable on Sustainable Palm Oil (RSPO) and GreenPalm. At the heart of the RSPO's standards is the requirement to not clear primary forest or any land that is important for wildlife and communities. There are also standards that address soil erosion, pollution, health and safety, labour conditions and others that make up the definition of sustainable palm oil. Over the last few years, these initiatives have gained momentum with increased participation from industry players ranging from retailers, such as Walmart and Tesco, to manufacturers, such as Unilever and Nestle and to traders such as Cargill. There is also increasing interest from Indian companies that have become RSPO members and have started to explore procuring sustainable palm oil.

INTRODUCTION

Global edible oil consumption has increased by about 18% over the last 5 years. The edible oil production mix is largely dominated by palm oil, which is now the single largest consumed vegetable oil in the world. India and China have emerged as the world's leading importers of palm oil. Change in consumption patterns, availability, pricing, policy changes towards imports and domestic production of other oilseeds have all influenced usage of edible oils. Given the underlying growth drivers of these segments, the mix of oil application is not expected to change significantly over the next five years.

Palm oil has dominated Indian imports since the last two decades, for its logistical advantages, contractual flexibility, and consumer acceptance. India is the lasgest importer of palm oil which is also the lowest priced oil. Palm oil contributes to around 74% (as of 2012) of the total edible oils that are imported into the country. Apart from human consumption, as RBD palmolein it also supports many other industries in India like refining, vanaspati and other industrial sectors.

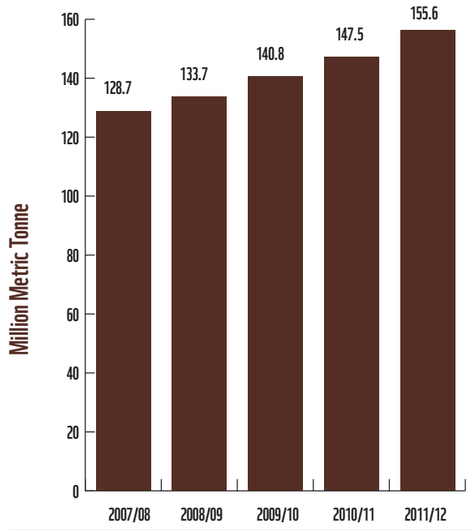
While there is a strong economic rationale for the consumption of palm oil, there is also growing awareness regarding the need for sustainable palm oil production that does not lead to social and environmental impacts, such as the destruction of forests, biodiversity loss, greenhouse gas emissions, community or labour issues.

This report provides a snapshot of the Indian palm oil industry and the sustainability trends influencing the global palm oil market. It is divided into three main sections:

- Global Edible Oil Scenario
- Indian Edible Oil Scenario
- Sustainability Issues in Palm Oil Cultivation and Solutions

2.1 Edible Oil Production

FIGURE 1
Global Edible Oil Production Over Last Five Years



Source: USDA FAS

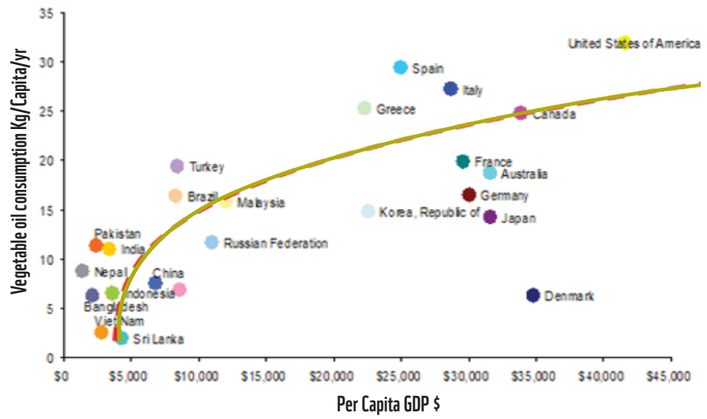
Global edible oil consumption has increased at a CAGR of ~4.9% from ~121.5 Mn MT in 2007 to ~155.6 Mn MT in 2011- 12.[4] This growth has been driven by:

- Increased population–Global population has increased from 5.5 Bn to 7 Bn in 2011 and is expected to increase to 7.5 Bn by 2015 and 8.1 Bn by 2020. China and India are expected to have 1.5 Bn and 1.4 Bn people respectively and the rest of the world would constitute 5.2 Bn people.[5] This would lead to more consumption, fuelling increased demand for edible oils.

- Increased per capita consumption - Per capita incomes have an established correlation with per capita consumption of value added products, such as edible oils. Per capita edible oil consumption of developing nations is significantly lower than developed nations. Sustained economic growth in emerging nations like India, China, Brazil is likely to have a positive influence on disposable incomes. This is expected to fuel further demand for edible oils.

India and China have emerged as the world's leading importers of vegetable oils. While, Indonesia, Malaysia and Argentina dominate the export market, representing approximately 75% of exports. China, Malaysia, the United States, the European Union, Indonesia, India, Brazil and Argentina are fats and oils-producing countries. China, the European Union and India are high-demand countries that supplement their deficits through imports.

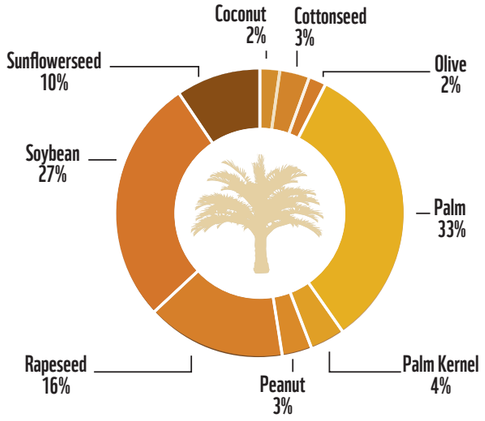
FIGURE 2
Correlation of per capita edible oil consumption and per capita GDP



Source: FAO

2.2 Global Edible Oil Production Mix

FIGURE 3
Global Vegetable Production Mix (2011-12). Total Global Production : 155.6 Mn MT



Source: USDA FAS

The edible oil production mix is largely dominated by palm oil production contributing ~33% of the total edible oil produced. Palm oil is versatile due to its scope of uses for both food and non-food products. Of the 155.6 Mn MT of edible oil produced in 2012, ~55.97 Mn MT is palm oil (including palm kernel oil). The growth in palm oil production has been significantly high at ~6.3% CAGR between 2007 to 2012 compared to growth in production of other oils like peanut, soyabean and sunflower oils that stand at ~3% to 3.5% over the same period.[6]

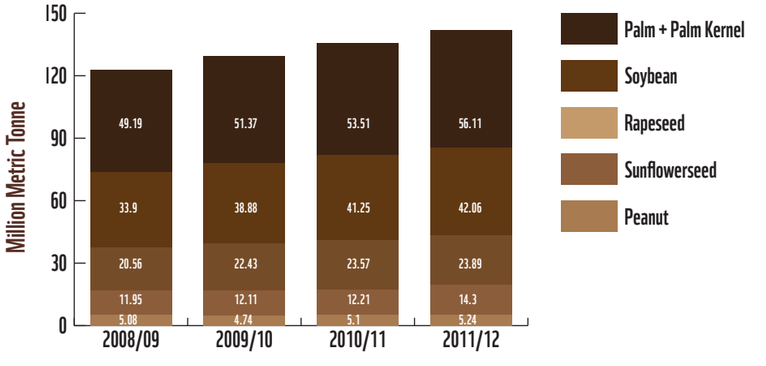
The global vegetable oil production mix has witnessed an increase in the contribution of palm oil (including palm kernel oil) from 34% to 36% and rapeseed oil increased from 14% to 16% over the last five years.

The contribution of peanut oil reduced from 4% to 3%, and soyabean oil reduced from 30% to 27% over the past six years.[7]

The significant growth in production, consumption and market share of palm oil is to a large extent due to:

- Palm oil yield of 3.80 tonnes per hectare per year is around nine times that of soyabean, seven and a half times that of rape seed and six times that of sunflower oil.

FIGURE 4
Major Vegetable Oil Production Globally

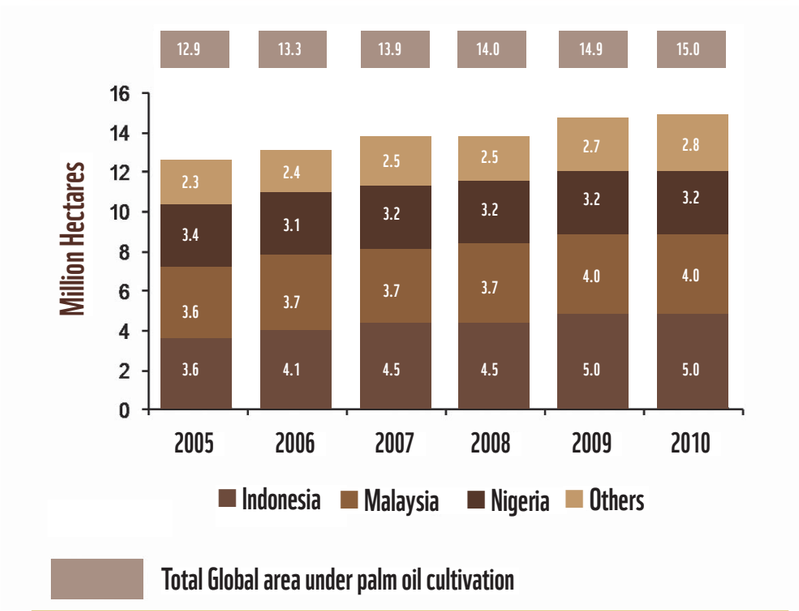


Source: USDA FAS

- Cost competitiveness vis-à-vis other vegetable oils and animal fats. Palm oil, the cheapest oil among soybean oil, rapeseed oil and sunflower seed oil, has been able to capture new markets and make inroads into markets that have traditionally preferred other oils.
- Concerns over the health hazards associated with trans-fatty acids (TFA) and genetically modified organisms (GMO) have also raised the demand for palm oil, as palm oil is not derived from a GMO nor does it contain TFA.
- Palm oil, which requires little or no hydrogenation for production of margarine, bakery shortenings and confectionery fats is an accepted substitute compared to vegetable oils, which need hydrogenation to produce these products.
- Compared to other oil crops, the oil palm produces high yields, is easy to cultivate and bears fruit all round the year

2.3 Global Palm Oil Market – Production

FIGURE 5
Area Under Oil Palm Cultivation Globally (2005-2010)



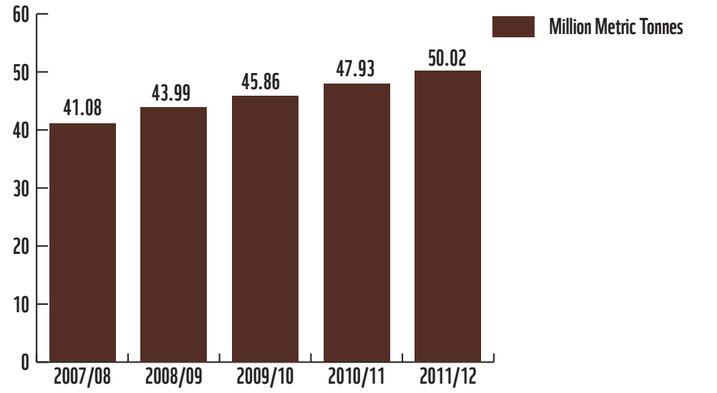
Source: FAQ Stat

Palm oil is mainly produced in South East Asia with Indonesia and Malaysia contributing to more than 89% of the total production of palm oil globally. The climate in this region is the most suitable for growth of oil palm fruit.

As on 2010, 15 Mn hectares of land is cultivated under oil palm fruit of which, 5 Mn hectares (i.e. 33%) is in Indonesia, and 4 Mn hectares (i.e. 27%) is cultivated in Malaysia. While the acreage under oil palm in Malaysia has not increased significantly, it has been on an upward trend in Indonesia, which is currently estimated to have at ~7 Mn hectares.

- Acreage under oil palm has been rapidly increasing in Indonesia, having grown at a CAGR of 8% over the past five years.
- Nigeria accounts for ~3.2 Mn hectares of the total land cultivated for palm oil production, but are very extensive and low yielding cultivations and hence, despite having more than 20% share of acreage under palm, it forms only ~2% of the global palm oil production.

FIGURE 6
Global Palm Oil Production Over Last Five Years



Source: USDA FAS

Globally, the acreage under oil palm fruit has been increasing at a CAGR of 3.8%. The world market for palm oil stands at 50.20 Mn MT (excluding palm kernel oil) in 2011-12. The global palm oil production has been increasing at a CAGR of 6.3% over the last five years.[8]

- Commercially, palm oil is used in various forms, such as, crude palm oil, crude palmolien, refined bleached deodorized (RBD) palm oil, RBD palmolien, palm kernel oil and as palm stearin.

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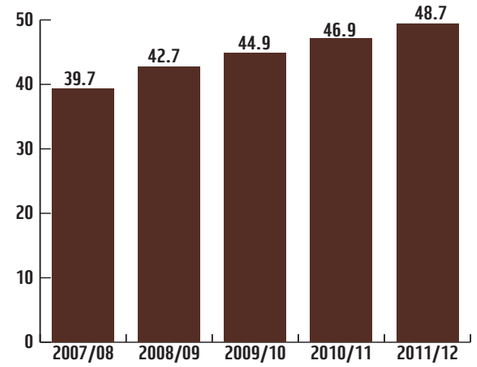
2.4 Global Palm Oil Market – Consumption

FIGURE 7
Global Palm Oil Consumption Over Last Five Years



Source USDA FAS

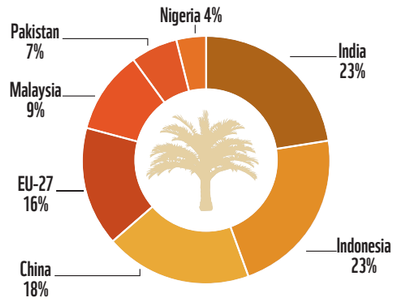
Global consumption of palm oil stands at ~48.7 Mn MT as of 2011-12. Consumption has been increasing by ~6.1% over the last five years on the back of growing demand for the oil, especially from developing countries like India and China.

India's palm oil consumption, as a part of the overall global consumption has increased from 13% in 2007-2008 to 15% in 2011-2012.

India's growth in consumption is outpacing the global rate and hence, India plays a vital role in driving the production of palm oil globally.

India, is followed by Indonesia, which is now a larger consumer of palm oil than China, contributing 23% of global palm oil consumption in 2011/12.[9]

FIGURE 8
Global Palm Oil Consumption by Country (2011-2012)



Total Global consumption 48.07 Million Metric Tonnes

Source: USDA FAS

2.5 Applications of Palm Oil

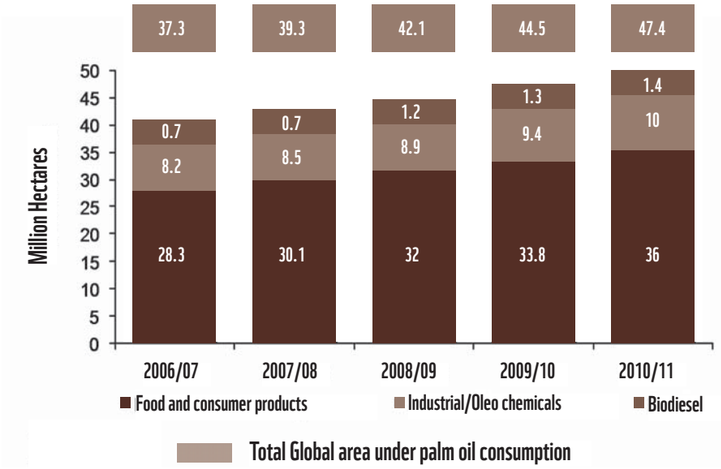
1) Food based applications

Palm oil is used, to a large extent, as a cooking oil, frying fats and a cheaper substitute for butter. It also used as vanaspati/vegetable ghee, margarine and spreads, confectionary and bakery fats (specialty fats) ice cream, coffee creamers and filled milk, emulsifiers, vitamin E supplements among others.

A range of food products for sale at a supermarket - mainly cakes, breads, and other baked goods, containing palm oil.

© RICHARD STONEHOUSE / WWF CANON

FIGURE 9
Application of Palm Oil Globally by User Segments



Source: USDA FAS

2) Non-food applications

As a non-food ingredient, palm oil finds application in the production of cosmetics, toiletries, soaps and detergents. It is also used in the FMCG market, used in the oleo chemical industry, as a base material for the production of surfactants (washing active substances) for laundry detergents, household cleaners and cosmetics.

USDA ESTIMATES THAT 75% OF THE GLOBAL PALM OIL CONSUMPTION IS FOR FOOD PURPOSES

According to USDA estimates, 75% of the global palm oil consumption is for food purposes, while ~22% is for industrial/non-food purposes. The remaining, though currently, of marginal quantity, is used for biodiesel.

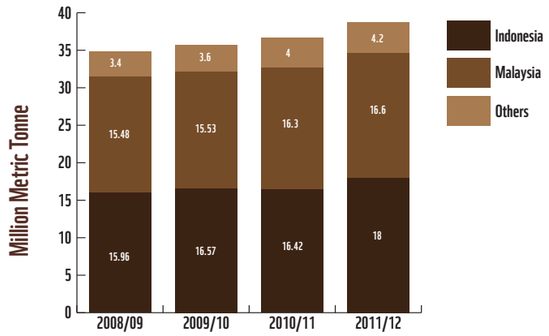
Though the major usage of palm oil due to its versatile applications is in the food industry, usage in the industrial segment has been gaining prominence.

Palm oil consumption by the food products industry has been increasing at a CAGR of 5.1% and industrial segment by a CAGR of 6.1%.

2.6 Global Palm Oil Market – International Trade

Indonesia and Malaysia are the largest producers of palm oil and contribute to about 89.% as of, 2011-12, of the worlds exports. Indonesia and Malaysia have increased palm oil acreage by a CAGR of 8% and 3% respectively over 2005 to 2010. Acreage under palm oil in Malaysia has now stagnated with no significant additions over the last few years. With the exception of Sarawak, Malaysia's primary focus recently has been on replanting existing cultivations. Moreover, yields have witnessed an improvement resulting in additional surpluses. Exports from Indonesia have grown at a CAGR of 3%, while exports from Malaysia have grown at a CAGR of 1.7% over 2008-09 to 2011-12.

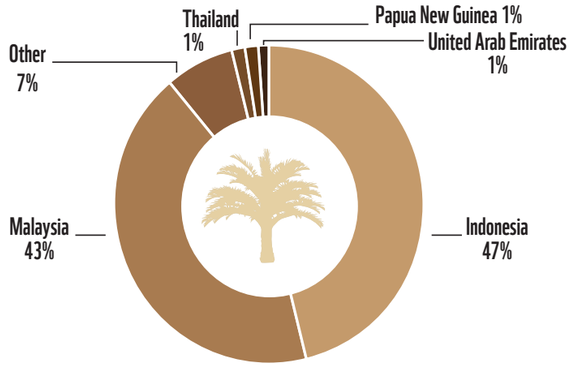
FIGURE 10
Major Exporters of Palm Oil



Source: USDA FAS

FIGURE 11
Major Exporters of Palm Oil: Total Global Exports Stand at 38.7 Mn MT in 2011-12

90%
OF PALM OIL IS EXPORTED BY INDONESIA AND MALAYSIA



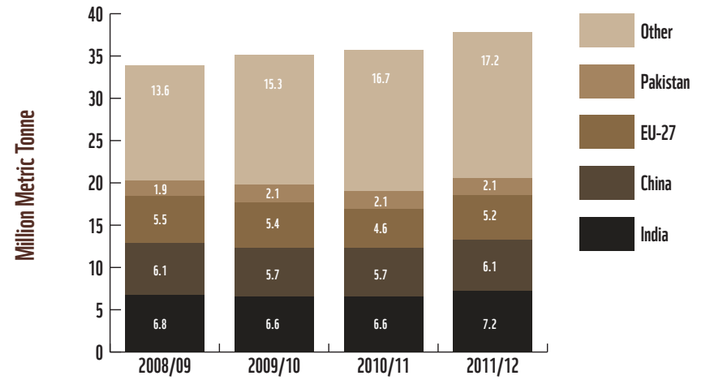
Source: USDA FAS

Indonesia's share in overall exports has increased from 45% to 46%, while Malaysia's share in the overall exports has reduced from 44% to 42%, over the last four years. [10]

Major importers of palm oil are India and China with imports of 7.2 Mn MT and 6.1 Mn Tons in 2011/12. The imports of both countries have been on the rise on account of shift from other oils and strong growth in the consumer products sector. Given the increasing prices of various oilseeds, palm oil is expected to gain further prominence, especially in emerging and developing countries in Asia and Africa.

FIGURE 12
Major Global Importers of Palm Oil

35.3%
OF PALM OIL IS IMPORTED TO INDIA AND CHINA



Source: USDA FAS

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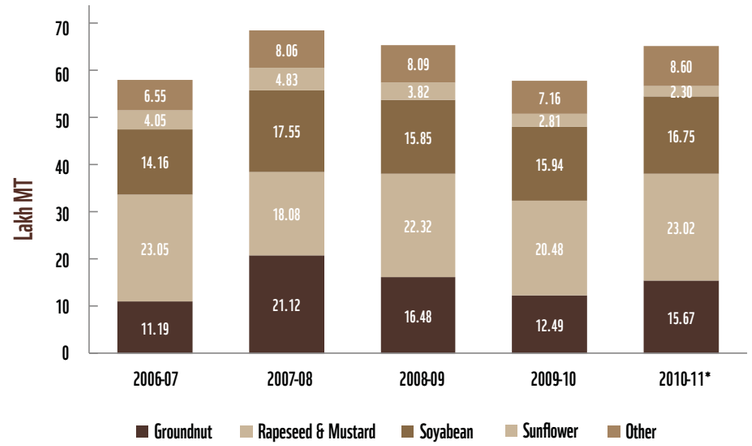
Clearing a swamp forest for a palm oil plantation, Central Kalimantan, Indonesia

FIGURE 13

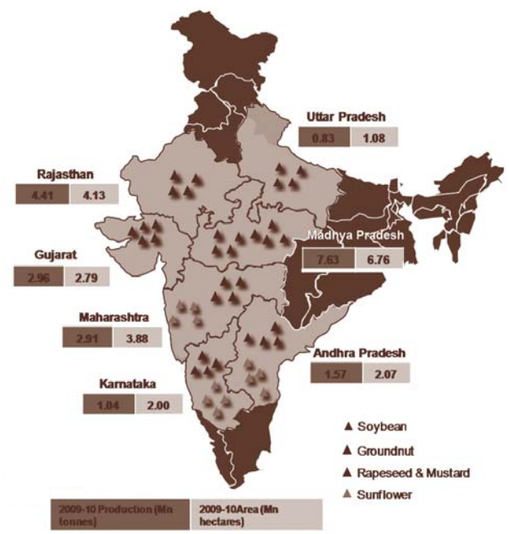
Production of Major Vegetable Oils in India



*Based on 4th Advance Estimate (declared by Min of Agriculture on 19.07.2011.
Source: Ministry of Agriculture

FIGURE 14

State-wise Area under Oilseed Cultivation and Oilseed Production



Source: Indiastat

India is the fourth largest oilseed producing country in the world, with 31.10 Mn MT harvest over an area of nearly 26 million hectares (2010-2011). The acreage under oilseed cultivation has grown at a CAGR of ~1.7% between 2001 to 2009-2010. The sector occupies an important position in the agricultural economy, with an estimated production of ~31.10 Mn MT of nine varieties of oilseeds.[11]

India's mix of vegetable oil production is largely dominated by production of rapeseed/mustard oil at 2.04 Mn MT contributing to 34.7% of the total edible oil production from primary sources in 2009-10. India contributes to 10.2% of the global rapeseed oil production.

This is followed by production of soyabean oil at 1.5 Mn MT, contributing to 27.07% of the total edible oil production in 2009-10. India contributes to ~4% of the global soyabean oil production.

Sunflower seed oil production in India has been diminishing at 0.28 Mn MT in 2009-10, contributing to 4.7% of the total edible oil production in the country. India forms ~3% of the global sunflower seed oil production.[12]

India is the world's largest producer of groundnuts, sesame seeds, linseeds and castor seeds with production of oilseeds concentrated in the central and southern parts of India, mainly Madhya Pradesh, Gujarat, Rajasthan, Maharashtra, Andhra Pradesh and Karnataka.

Production of edible oil from major oilseeds (that is primary sources) in India has grown at a CAGR of 3% from ~25.1 Mn MT in 2003-04 to reach ~31.10 Mn MT in 2010-11. [13]

The edible oil industry comprises of 50,000 Expellers, 600 Solvent Extraction Plants, 300 Vegetable Oil Refineries, and 175 Hydrogenation Plants.[14]

The Indian edible oil sector averages a turnover of $10 billion per annum and earns foreign exchange of $ 90 million.[15]

Palm oil is bought from Malaysia and Indonesia and soy oil from Brazil and Argentina. India imports its olive oil demand from Spain, Italy, Turkey and Greece. India's vegetable oil import was 9.9 Mn MT in 2011-12.[16] Of the total edible oil available in the country in 2011-2012, ~21% was imported, of which palm oil consumption alone was 7.2 Mn MT. The second most-consumed edible oil was soy oil at 2.7 Mn MT, followed by rapeseed oil at 2.3 Mn MT, and groundnut oil by 1. 3 Mn MT.

INDIA IS THE WORLD'S LARGEST CONSUMING MARKET FOR PALM OIL

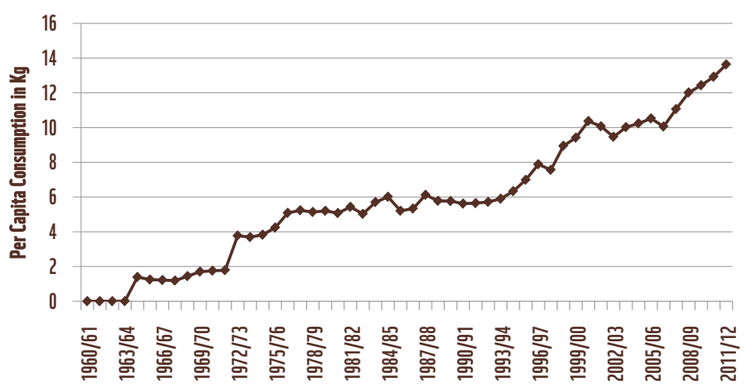
EDIBLE OIL CONSUMPTION IN INDIA

Edible oil consumption in India is traditionally region specific. While coconut, peanut, and sunflower oil are prevalent in south India, peanut and cottonseed oil are preferred in Gujarat. Rapeseed oil is prevalent in northeast India and soybean oil is preferred in central India. A large part of the oil purchased in India is for household consumption or institutional uses (food processors, restaurants, and hotels). Oil in India is sold primaririly (89%) in loose form and a small percentage (11%) in the branded and packaged form.[17]

The statutory regulations in the vegetable oil industry in India are administered through the Vegetable Oil Products (Regulation) Order, 1998; Edible Oils Packaging (Regulation) Order, 1998; and the Solvent Extracted Oil, De-oiled Meal and Edible Flour (Control) Order 1967, under the Essential Commodities Act. From 2008, the import duty on crude edible oils was abolished and duty on refined edible oils lowered to 7.5%.

As the chart below shows, edible oil consumption has been steadily increasing over the past few decades. With the increase in per capita consumption, there is likely to be an increase in the demand for edible oils. However, India's per capita consumption is still much lower than the world average or as compared to countries such as the US and China.

FIGURE 16
Edible Oil Consumption in India



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Moisturisers, like many other cosmetics are likely to contain palm oil

In 2011/12 the per capita consumption of edible oil in India was extremely low at 13.6 kg/annum, as compared to 21.1 kg/annum in China, 17.2 kg/annum in Japan, and 40.5 kg/annum in the US.[18]

Source: USDA FAS and FAO Statistics

3.1 Consumption of palm oil in India

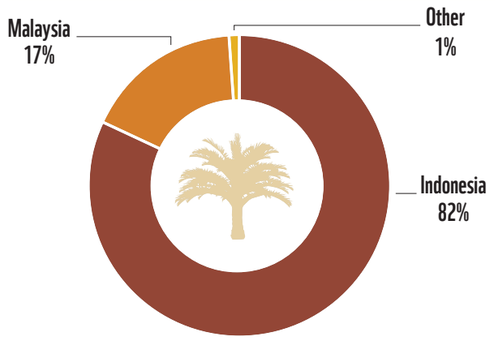
Almost 90% of the palm oil imported and produced domestically is used for edible/ food purposes, while the remaining is used for industrial/non-edible purposes (like soap, detergent and cosmetics manufacturing, etc).

Palm oil is now the single largest consumed vegetable oil in India. Over the last 25 years, factors such as change in consumption patterns, availability, pricing, policy changes towards imports and domestic production of other oilseeds have all influenced usage.

Given the underlying growth drivers of these segments, the mix of oil application is not expected to change significantly over the next five years.

Palm oil is consumed only in refined form in the edible/food industry whereas, derivatives like palm stearin and PFAD (palm fatty acid distillate), and refined palm kernel oil are used for industrial applications. The largest consumers of oil are the refiners who sell loose/packaged oil for edible purposes.

FIGURE 16
Imports of Palm Oil in India by Country



Note: The country wise imports has been given for the year 2012
Source: US Comtrade

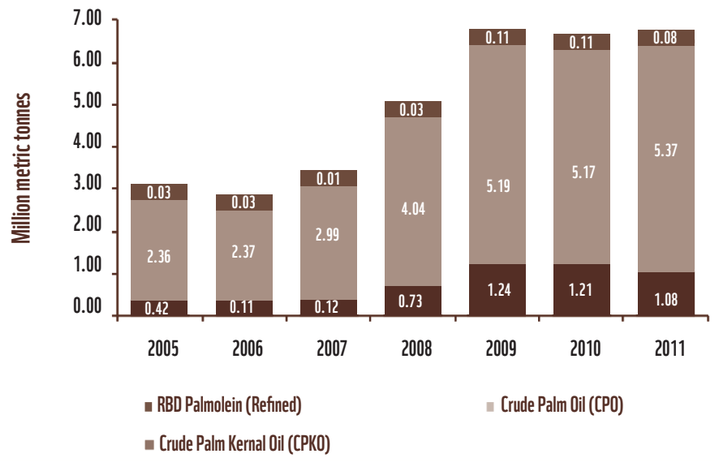
3.2 Palm Oil in India – Imports

Palm oil has dominated Indian imports since the mid-1990s, for its logistical advantages, contractual flexibility, and consumer acceptance, as the lowest priced oil.

India's palm oil imports have grown at a CAGR of ~17.09% to reach ~7.4 Mn MT in 2011-2012.

Palm oil contributes to around 77% (as on 2011) of the total edible oils that are imported in the country.

FIGURE 17
Imports of Palm Oil in India



Source: Solvent Extractors Association

82% OF PALM OIL IN INDIA IS IMPORTED FROM INDONESIA

India imported crude palm oil (CPO) at an average price of $0.83/kg (in 2010) and crude palm kermel oil (CPKO) at $1.02/kg (in 2010) mainly from Indonesia and refined palm oil, also called refined, bleached and deodorized (RBD) palm olein from Malaysia.[19]

As of 2010, Indonesia accounts for ~82%, while Malaysia accounts for ~17% of the total palm oil imports to India.

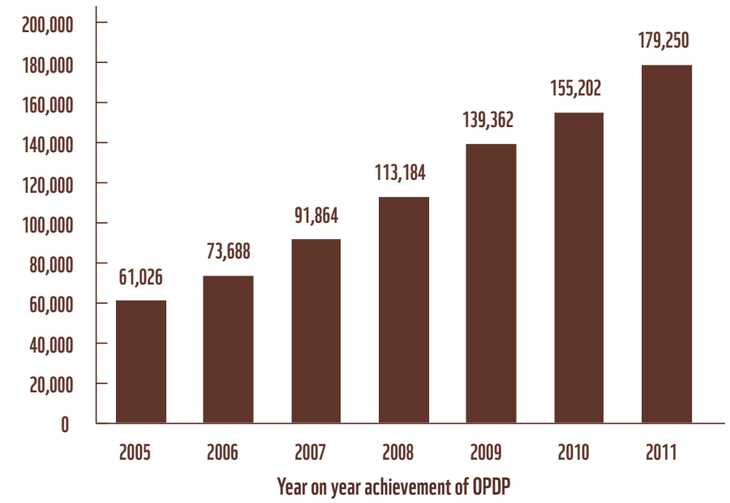
The major importing and trading centres for palm in India are Chennai, Kakinada, Mumbai and Kandla. Other centres like Mundra, Kolkata, Mangalore and Karwar also play an important role.

Palm oil prices in India depend on the imported palm oil from Malaysia and Indonesia at various ports. Besides this, palm oil trade in India is influenced by the supply-demand scene in the domestic market, which includes influencing factors like domestic oilseed production, prices of various domestically produced and imported oils, production and trade policies of the government (mainly the export-import policy) and the over-all health of the economy (as it has a strong bearing on the purchasing power of consumers). The entire industry in India is dominated by importers, large refiners and companies involved in wholesale and retail trade.

3.3 Palm oil in India – Production

Despite being the world's fourth largest oilseed producing country, India's share of palm oil production is small, accounting for 0.2% share in the total world produce. Of the 15 MHa under oil palm fruit production globally, acreage under oil palm in India stands at ~155,202 Ha, which contributes to 1% of the global acreage.

FIGURE 18
Total Area under Oil Palm Fruit (In hectares)



Source: Ministry of Agriculture

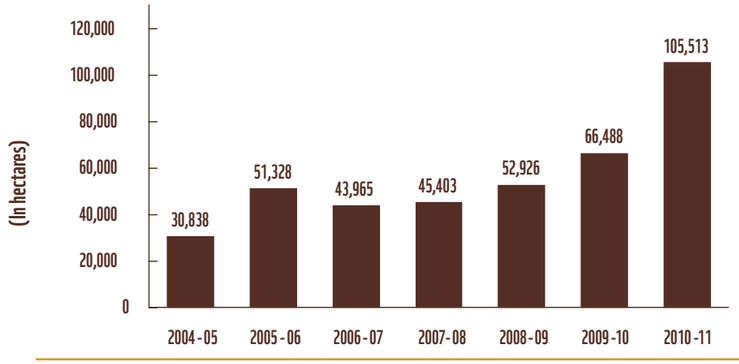
TOTAL AREA UNDER PALM OIL IS 182,486 HECTARES AS OF 2011

However, the acreage has been growing at a significant rate of 21% CAGR during the last five years.

Implementation of the Oil Palm Development Programme (OPDP) is being carried out by Horticulture Departments and Agriculture Departments of the concerned State Governments. Financial assistance, cultivation subsidies, etc. are provided to farmers for encouraging the oil palm cultivation in India under the OPDP programme.

Of the total cultivated area of 191,071 hectares, as of 2010-11, 95% (ie, 182,486 hectares) was cultivated under the OPDP.

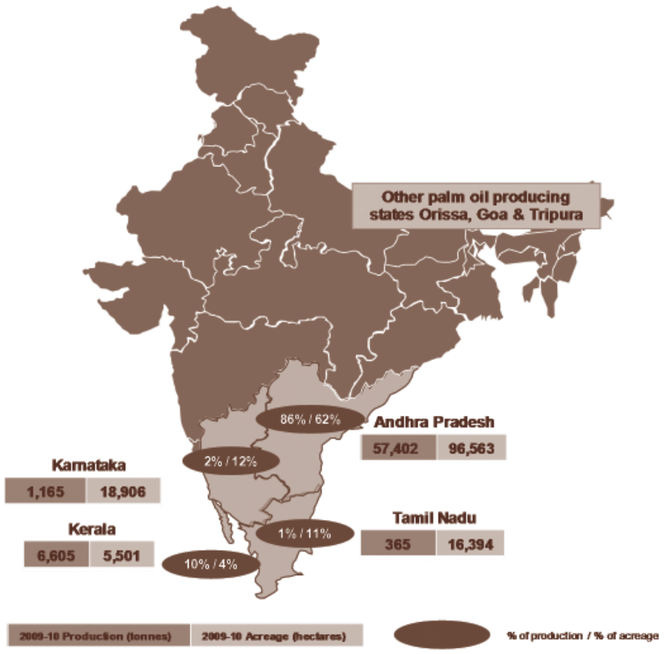
FIGURE 19
Production of Crude Palm Oil in India (under OPDP)



Source: Ministry of Agriculture

Palm oil production in India has grown at 22.7% CAGR over the past five years to reach 105,513 Mn MT in 2011. However, India would continue to be a net importer of palm oil, with most of its demand expected to be met through imports.

FIGURE 20
State-wise Palm Oil Production and Acreage in India



Note: Figurs for 2009-2012
Source: Ministry of Agriculture

Andhra Pradesh is the leading palm oil producing state in India contributing approximately 86 % of country's production, followed by Kerala (10%) and Karnataka (2%). Other palm oil producing states include Orissa, Tamil Nadu, Goa and Gujarat.

Andhra Pradesh has been the largest palm oil producing state in India, having shown more than 100% achievability of the targeted acreage from 2004-05 to 2009-10 under the Oil Palm Development Programme.

Other states like Karnataka have achieved ~85% and Tamil Nadu has achieved ~60% of the targeted acreage over the same period.

3.4 Major constraints in domestic cultivation of oil palm[20]

- **Geographical location:**

The ideal locations for oil palm trees are within eight degrees latitude north and south of the Equator. Therefore, India's geographical position is not ideal for oil palm cultivation.

- **Irrigation:**

Palms need regular rainfall throughout the year. However, they can withstand dry periods of 3-4 months depending on soils type without irrigation. Oil palm can be grown in Kerala, Andhra Pradesh, Karnataka, Goa and a few other areas, but only with irrigation. This places significant pressure on the hydrological system of the region.

- **Long gestation periods:**

Oil palm has very high productivity when compared to other oilseeds like mustard, however, the farmers would have to wait for four years for the trees in India to start yielding palm fruit bunches, which would then give palm oil and palm kernel oil.

- **Small farm holdings:**

Indian farmers generally have very small farm holdings, making investments, in a sector like palm with varied and geographically diverse marginal farm holdings, challenging.

- **Limited investments by corporate sector:**

The entry of large corporates into planting has been limited compared with Malaysia and Indonesia. For plantations to be successful, these have to be taken up on a large scale to create efficiencies.

3.5 Policies related to production and distribution of palm oil

SUBSIDIES FOR DISTRIBUTION OF IMPORTED PALM OIL:

The Ministry of Food has been subsiding imported edible oil distribution under the public distribution system (PDS):

- To provide relief to consumers, in particular below poverty line households, from the rising prices of edible oils, the Central Government introduced a scheme for distribution of upto 10 lakh tons of imported edible oils in 2008-09 at a subsidy of Rs. 15/- per kg through State Governments/UTs at the rate of one liter per ration card per month.
- Four Central Public Sector Undertakings, PEC, MMTC, STC and NAFED have been entrusted the job of importing, refining, packing and distribution of subsidized edible oils to the States/UTs.
- The scheme for import of 10 lakh tons of edible oils with a subsidy of Rs 15/- per kg was extended during 2009-10, 2010-2011 and in 2011-12 upto 30.9.2012. After the implementation of the scheme, edible oil prices have substantially declined and poorer sections were provided edible oils at subsidized rates.[21]

OIL PALM DEVELOPMENT PROGRAMME IN INDIA:

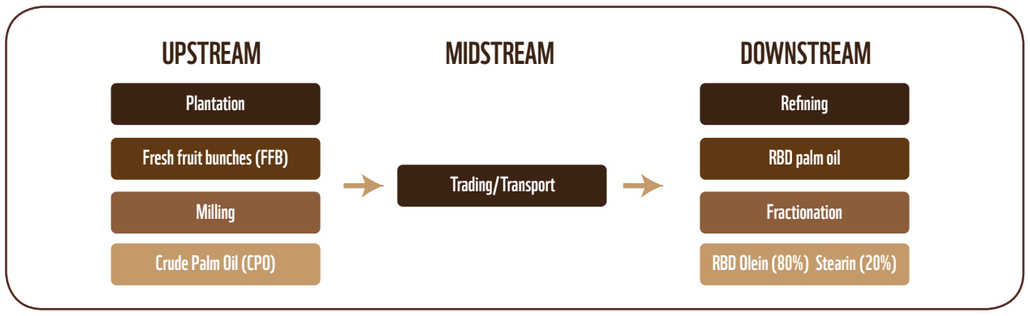
- OPDP was launched during 1991- 92 under the "Technology Mission on Oilseeds and Pulses" (TMOP), with a focus on expansion of area under oil palm cultivation.
- From 2004-05 onwards, the scheme is being implemented as part of the "Integrated Scheme of Oilseeds, Pulses, Oil Palm & Maize" (ISOPOM) and provides support for oil palm cultivation in 12 states: Andhra Pradesh, Assam, Gujarat, Goa, Karnataka, Kerala, Maharashtra, Mizoram, Orissa, Tamil Nadu, Tripura & West Bengal.

- For the year 2011-12, the government rolled out the Oil Palm Area Expansion (OPAE) Programme in order to bring an additional 60,000 hectares area under oil palm cultivation.
- The government has also announced various subsidies for oil palm growers for planting, buying pump set and drip-irrigation systems, partial compensation in case of loss during the gestation period and support for processing units.
- For this, a total outlay of INR 300 crores has been proposed to provide subsidies, financial support and loss compensation among others.[22]

3.6 Marketing and Trade Overview of Palm oil in India

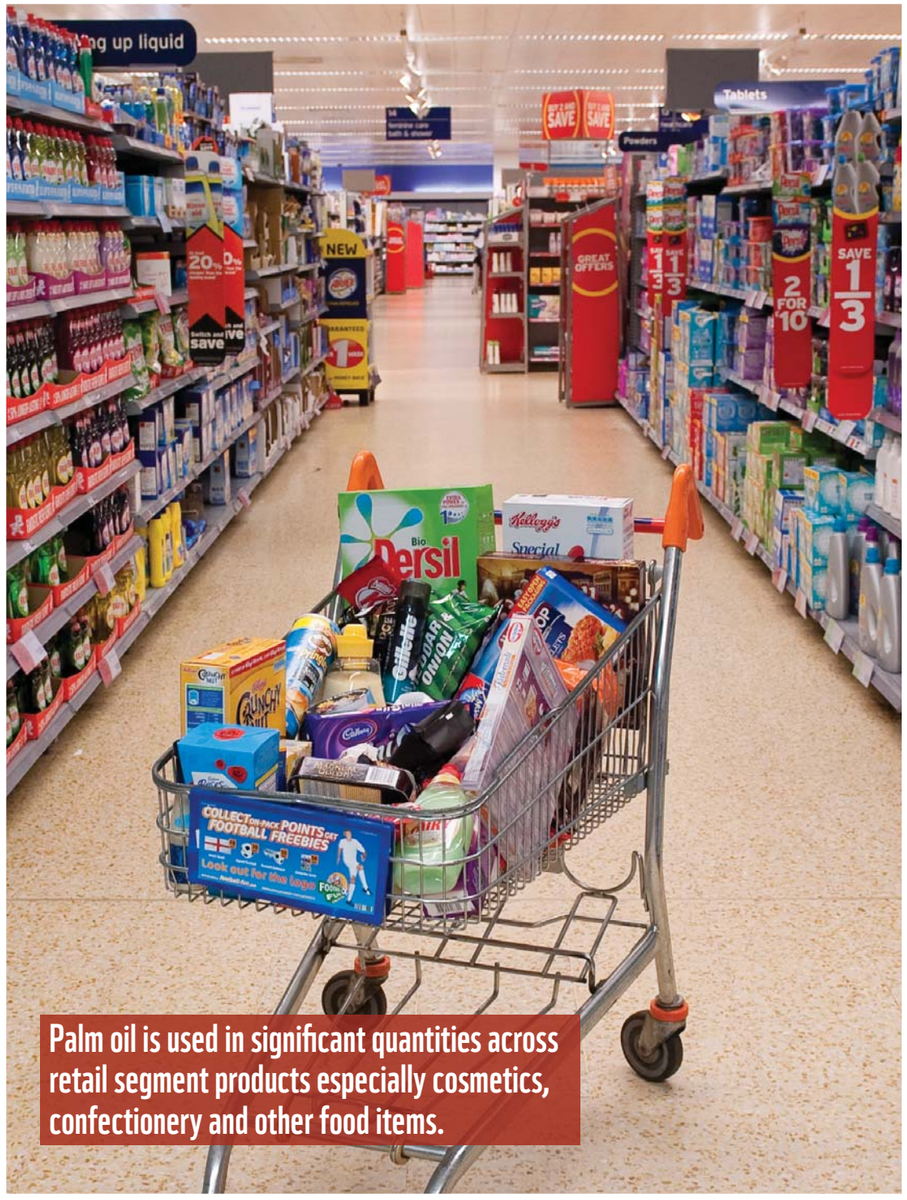
Indian consumption patterns of all vegetable oils are influenced by the domestic import tariff policies, which affect the relative world prices of palm oil.

India imports refined, bleached and deodorized palmolein (RBDPO) from Malaysia and imports crude palm oil (CPO) from Indonesia. By refining, bleaching and deodorizing palm oil, physical impurities, odors and colors are removed to use as cooking oil (olein) and palm stearin, as raw material for soaps and other personal care items. RDB palmolein is used primarily as cooking oil, ready for human consumption, while CPO is refined domestically.



THE FACTORS THAT INFLUENCE THE MARKET FOR PALM OIL IN INDIA ARE:

- Price sensitivity of Indian importers to changing international prices of competing oils
- World demand and supply fluctuations of competitive edible oils
- Domestic demand and supply fluctuations of other oils and oilseeds
- Seasonal cycles, as April to December are the peak production period
- Export - Import policies of the importing nations



Palm oil is used in significant quantities across retail segment products especially cosmetics, confectionery and other food items.

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INDIA'S TRADE POLICY

From the 1970s to 1994 the State Trading Corporation controlled edible oil imports. The quantity to be imported was decided by a Center based ministerial committee depending on the domestic supply and demand conditions, as also the balance-of-payment situation prevailing in the country. The government undertook an initiative, known as the Technology Mission on Oilseeds, wherein imports were restricted during 1994-1998 to help foster self-sufficiency. After signing on with WTO, oil imports were placed under the Open General License (OGL), allowing unlimited imports by private traders in India.

Since 2000, there have been constant revisions in the import duty structure of crude and refined palm oil, wherein the import duty from 75% in 2001 was curtailed to 65% in 2003 and was raised back to 66.3% in 2004. The duty was again slashed in 2007 to 51.5% and then finally to 20.6% in March, 2008.

In response to growing domestic food inflation, in April 2008, most duties on crude edible oil were abolished.

REVISION OF IMPORT DUTY STRUCTURE ON CRUDE AND REFINED PALM OIL

Revision of import duty structure		
Oil	**Crude palm oil and crude olein**	**Refined palm oil and RBD palmolein**
21-11-00	25% (no surcharge)	71.60%
28-02-01	75%	92.40%
30-10-01	65%	92.40%
30-04-03	65%	70%
09-07-04	65% + 2% CESS = 66.3%	76.50%
31-01-07	50% + 3% Edu cess = 51.5%	59.23%
23-07-07	45% + 3% Edu cess = 46.35%	54.08%
20-03-08	20% + 3% Edu cess = 20.6%	28.30%
01-04-08	Nil	7.5% + 3% Edu cess = 7.73%
18-03-09	Nil	7.5% + 3% Edu cess = 7.73%
01-03-11	Nil	7.5% + 3% Edu cess = 7.73%

Source: Solvent Extractor's Association

Currently, the import duty on crude palm oil and crude olein stands nil, while the import duty on refined palm oil and RBD palmolein stands at 7.5% + 3%. As per the Solvent Extractor's Association, these duties are applicable with effect from 1st March 2011.

CURRENT IMPORT DUTY STRUCTURE IN INDIA ON VARIOUS FORMS OF PALM OIL:

Revised Edible & Non-edible Oils – Import Duty Structure						
Edible oil	**Customs duty**	**CVD**	**Cess on CVD**	**Education cess**	**SAD**	**Effective duty**
Crude Palm Oil & Crude Olein	Nil	Nil	Nil	Nil	Nil	Nil
Refined Palm Oil & RBD Palmolein	7.50%	Nil	Nil	3%	Nil	7.73%
Non Edible oil						
Crude Palm Stearin	10%	8%	3%	3%	4%	24.42%
Crude Palm Kernel Oil	12.50%	Nil	Nil	3%	4%	17.37%

Note: CVD: Countervailing duties,
SAD: Special Additional Duty
Source: Solvent Extractor's Association

In 2000, the Government introduced a system of "tariff rate values", which meant that import prices were calculated based on the tariff revenue per ton imported and adjusted according to current world prices at the time. This was done primarily to avoid under-invoicing by importers. Indian consumers, being extremely price sensitive, also had a good measure of influence on the composition of oil imported.

The table below indicates the prevailing tariff values for palm oil imports into India. These values indicate the floor price in CIF US$/MT, below which the respective oils cannot be imported. However, on the back of increasing international prices, Indian average import prices stood at $830/MT in 2010 up from $440/MT in 2006. Hence, the tariff values today are much lower than the actual import prices, as they haven't been revised since March 2007.

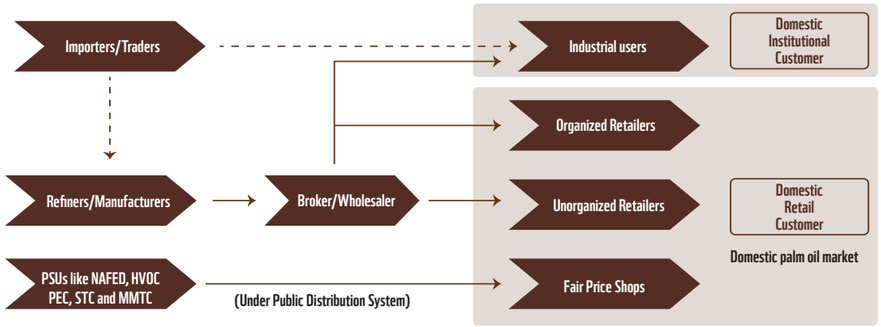
TARIFF VALUES W.E.F 14TH DECEMBER 2012 (PRICE IN CIF US$/MT)

Tarrif Values for palm oil, its derivatives and fractions	
Crude Palm Oil	447
RBD Palm Oil	476
Other-Palm Oil	462
Crude Palmolien	481
RBD Palmolien	872
Other Palmolien	483

Source: Solvent Extractor's Association

3.7 The India Palm Oil Value Chain

The palm oil supply chain is multi-tiered. The processing (refining) sector has excess capacities in both local and export markets. The manufacturing sector, at present, is healthy, but vulnerable without strongly branded products, distribution and retail the sector. However, this status is likely to change over time with the distributors and retailers becoming stronger and more organized. It is also likely that palm oil will be sourced directly from manufacturers, at the expense of upstream growers and processors, leading to value chain disintermediation.



Source: Secondary Research and Industry Discussions

The value chain in the palm oil industry generally begins with the growers. India has negligible production of oil palm fruit and hence, crude palm oil is mainly imported.

- The imports are directly undertaken by the refineries/manufacturers or indirectly through a trader/importer.
- These importers who are purely in the trading business supply raw material (crude palm oil) to the refineries or RBD palmolein to the industrial users
- As mentioned earlier, PEC, MMTC, STC and NAFED have been entrusted the job of importing, refining, packing and distribution of subsidized edible oils to the States/UTs.
- HVOC (Hindustan Vegetable Oil Corporation) has also been entrusted to supply edible oils to the States/UTs under the Public Distribution System

3.8 The Indian Oil Processing Sector

Three major processing technologies are prevalent in the Indian oilseed processing industry.

1. Traditional mechanical crushing or expelling
2. Solvent extraction for processing oilseeds and expeller cake
3. Expander-solvent extraction

The processing industry also includes an oil refining sector for refining domestic solvent-extracted oils, imported crude solvent-extracted oils and for vanaspati refining (which includes both domestic and imported hydrogenated oil). India's oilseed processing industry's capacities are low in technical efficiencies.

Stakeholders in Indian Palm Oil Industry [23]

Companies	Growers	Refiners/ Processors
Acalmar oils & Fats Limited		√
Adani Wilmar Ltd		√
Amira Foods India Pvt. Ltd.		√
Anik Industries		√
Arani Agro Oil Industries Ltd		√
Bhadravati Balaji Oil Palm	√	
Bunge India Pvt Ltd		√
Cargill India		√
Cauvery Palm Oil Limited	√	
Foods, Fats and Fertilizers Limited	√	
Godrej Oil Palm Ltd	√	
Gokul Refoils and Solvents Ltd		√
Gujarat Ambuja Exports Ltd		√
JVL Agro Industries Ltd		√
Kalueeshwari Refinry Pvt Ltd		√
Kamani Oils		√
Kanpur Edibles Pvt. Ltd.		√
KS Oils Ltd.		√
KTV Oils		√
Liberty Oil Mills Ltd.		√
MMTC Limited*		√
Oil Palm India Limited	√	
Rasoi Ltd		√
Ruchi Soya India Limited (and its subsidiary Mac Oil Palm Ltd)	√	√
Sanwaria Agro Oils Ltd.		√
The State Trading Corporation of India Ltd**		√
Vimal Oil Mills		√

The end consumers of palm oil include large FMCG companies that use palm oil or its derivatives in their food products, soaps and detergents among others. Some of the end users of palm oil or its derivatives include companies such as ITC, Godrej Consumer, Britannia, Hindustan Unilever, Pepsi Foods, Parle among others.

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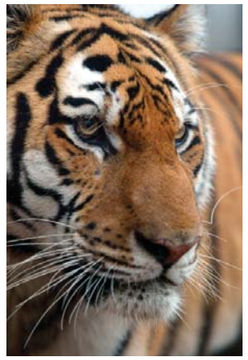

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The constant increase in demand for palm oil in India and globally, has in turn led to the increase in production of palm oil, which has been increasing at the rate of CAGR of 6.1% over the last five years. The increase in production has been achieved through high yields as well as increased acreage.

In the major palm oil producing regions of Indonesia and Malaysia, almost a third of forest loss in the last 10 years was due to the expansion of oil palm. When forests are felled and peat swamps drained, they are often also burnt, creating a haze that covers large areas, affecting people's health and disrupting economic activities. At the global level, the impacts of forest loss are significant. As trees and vegetation go up in smoke or are left to rot, and as peatlands and swamp forests dry out, they release greenhouse gases into the atmosphere that contribute to global warming. Fifteen percent of all human-induced greenhouse gas emissions are caused by deforestation, forest degradation and peatland emissions.[24]

The net change in forest area, globally, in the period 2000–2010 was estimated at ~5.2 million hectares per year (an area about the size of Costa Rica).[25] When forests shrink, so does the home of endangered species, such as the Sumatran tiger and rhino, elephant and orangutan—species which are now on the brink of extinction. Loss of natural forests also means loss of the services that forests provide, such as clean water and soil erosion control. When forests, vital to communities, are cleared, people lose their land and their livelihoods—sometimes even their homes.

It is however important to understand that palm oil itself is not the problem, *but rather how palm oil is produced*. When done right, palm oil can be a catalyst for development and to improve livelihoods. It can also enhance biodiversity when planted on degraded lands.

To avoid contributing to deforestation and social problems, palm oil producers, users and traders need to move towards sustainable palm oil.

In the following section, the report focuses on sustainability issues linked to oil palm cultivation. It gives an overview of the environmental impacts related to palm oil production; existing sustainable initiatives, such as the Roundtable on Sustainable Palm Oil and global commitments to sustainable palm oil.

ENVIRONMENTAL IMPACTS OF PALM OIL PRODUCTION

1. **Deforestation –** Substantial tracts of tropical forests are cleared to make room for large plantations to service an ever increasing demand for palm oil. Rautner et al (2005)[26] showed that the forest cover on the island of Borneo had declined from 73.7 percent in 1985 to 50.4 percent in 2005, while the projected cover in 2010 and 2020 was 44.4 percent and 32.6 percent respectively. Loss of forest cover in Sumatra, Indonesia, has also been very alarming, particularly in the Province of Riau, which has the largest area of lowland peat forests in the country. An assessment of deforestation and forest degradation from 1982 to 2007 (Uryu et al, 2008)[27] showed a 65 percent loss of forest cover over the 25-year

period, or a loss of about 4.2 million hectares of forest. It was estimated that the development of timber plantations (Acacia), contributed to 24 percent, while the cultivation of oil palm contributed to 29 percent of the forest loss following initial exploitation of the timber resource.

2. **Loss of biodiversity –** Concerns about biodiversity loss are directly related to the loss of natural forests. In particular, orangutan habitats have been threatened by palm oil production. In 1900, there were around 315,000 orangutans in Indonesia and Malaysia. Today, fewer than 50,000 exist in the wild, split into small groups. Scientists say the palm oil industry is the biggest threat to orangutans,[28] with the species like to be driven to extinction within 12 years unless the devastation of their natural habitat is halted. A related problem has been that fragmentation of natural forest habitats and encroachment by palm oil development which has been resulted in serious human-wildlife conflicts. A case in point is the elephant-human conflict along the floodplains of the Kinabatangan River in Sabah, Malaysia, where the natural forest corridor of the pygmy elephants has been fragmented by development of oil palm plantations. Similar situations have been reported in Riau and Bengkulu provinces in Indonesia.

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3. **Climate change –** 15% of all human-induced greenhouse gas emissions are caused by deforestation, forest degradation and peatland emissions[29]. As land on mineral soil becomes less readily available, the expansion of oil palm is increasing on peat lands. It has been estimated that Indonesia alone has 22.5 million hectares of peat soil, which is about 12 percent of its total land area. As these areas are drained, the peat is exposed to oxidation, resulting in significant CO_2 release over an extended period. A Delft Hydraulics study showed that at present, CO_2 emissions arising from decomposition of drained peat lands in Indonesia are ~632 Mt/yr, ranging from 355 Mt/yr to 874 Mt/yr (Hooijer et al, 2006)[30]. Further, an estimated average emission of 1400 Mt/yr was caused by peat land fires over 1997-2006. Other significant sources of GHG emissions associated with oil palm are the use of fires for land clearing and the emissions of methane from the effluent treatment ponds of palm oil mills. Although, the ASEAN countries signed the ASEAN Agreement on Trans-boundary Haze Pollution in 2002 and adopted a regional policy to implement zero burning (ASEAN Secretariat, 2003)[31], use of fire for clearing land for agriculture, continues and contributes to air pollution in the region.

4. **Use of pesticides and fertilizers –** Misuse of pesticides and fertilizers is frequently cited as a negative impact of oil palm cultivation. In general, pesticide use is low compared to many other crops, but some chemicals used, pose significant risks to operators and smallholders and the environment. The Roundtable on Sustainable Palm Oil (RSPO), Principles & Criteria require the elimination of the use of chemicals categorized as World Health Organization categorized by Type 1A and 1B, or listed by the Stockholm or Rotterdam Conventions. Among these hazardous chemicals, the herbicide paraquat gives the most cause for concern, as it poses serious health hazards to the spray operators. The Pesticides Action Network-Asia & the Pacific has called for a ban on paraquat production and use on numerous occasions, but to no avail (PAN AP, 2009).[32]

SUSTAINABILITY INITIATIVES

ROUNDTABLE ON SUSTAINABLE PALM OIL (RSPO)

At a meeting among several European NGOs in Zurich in November, 2002, it was decided that the involvement of major players in the supply chain, including the financial sector, producers and users of palm oil is vital for finding a solution. This led to the idea of convening a roundtable to address this issue. After nearly two years of tough negotiations among the parties, particularly over the governance structure of the organisation, the Roundtable on Sustainable Palm Oil (RSPO) was established in April 2004 as a multi-stakeholder platform, involving all key players (such as AAK, KLK, Sainsbury's, Unilever, WWF and others) to address the main concerns and progress towards promotion of the production and use of sustainable palm oil. The growth in membership was impressive, starting from less than 50 ordinary members in the inaugural year to 802 Ordinary Members and 107 Affiliate Members (December 31st 2012).[33] That it managed to develop standards for production of sustainable palm oil (RSPO Principles and Criteria), within two years of its inception and the certification systems to support the production and trade in certified sustainable palm oil (CSPO), in the subsequent two years, is an unprecedented achievement. Trade in CSPO is now a commercial reality and at present, more than ~6.7 Mn MT of CSPO is being supplied by 43 certified growers and over 188 certified palm oil mills.

The RSPO trademark can be applied on products that use certified sustainable palm oil, providing assurance for consumers that the palm oil in the product has not caused environmental or social harm.

In response to the urgent and pressing global call for sustainably produced palm oil, the Roundtable on Sustainable Palm Oil (RSPO) was set up in 2003/4. RSPO is a multi-stakeholder forum, bringing together representatives from seven sectors of the palm oil industry - oil palm producers, palm oil processors or traders, consumer goods manufacturers, retailers, banks and investors, environmental and nature conservation NGOs and social or developmental NGOs - to develop and implement global standards for sustainable palm oil.

At the heart of RSPO's standard, is the requirement not to clear primary forest or any land that is important for wildlife and communities. There are also standards that address soil erosion, pollution, health and safety, labour conditions and others that define sustainable palm oil. The RSPO has set strict standards for responsible oil palm plantations, coupled with an independent system for auditing plantations, mills and the supply chain right up to the end users. These standards include:

- No conversion of primary forest or socially or ecological valuable areas for plantations
- Protection of endangered animals and plants
- Protection of water, soil and air (including a ban on the use of fire for clearing land)
- No child labour and the creation of educational opportunities for children living on the plantation

14%
CERTIFIED SUSTAINABLE PALM OIL (CSPO) OF GLOBAL PALM OIL PRODUCTION AND GROWING

+1.4m ha
OF PALM OIL HAVE BEEN CERTIFIED ACCORDING TO RSPO STANDARDS

AROUND 46.9% OF AVAILABLE CSPO ON THE MARKET HAS BEEN SOLD

- Inclusion and support of smallholders
- Regular assessment of plantations by independent accredited certifiers

Sustainable palm oil certified by the RSPO has been available since November 2008, and provides assurance that valuable tropical forests have not been cleared and that environmental and social safeguards have been met during the production of the palm oil. In addition, RSPO certification verifies the legality of plantation operations.

Any company using palm oil (retailer, manufacturer, etc.) can get started on the journey towards sustainable palm oil now by taking the following steps:

- Commit to source 100% certified sustainable palm oil by 2015 and implement a time-bound action plan to deliver the commitment
- Publicly acknowledge that irresponsible palm oil production has negative environmental and climate impacts, and the important role sustainable palm oil can play as a solution
- Join RSPO and support sustainable palm oil
- Purchase sustainable palm oil certificates known as GreenPalm. More details are mentioned further in the document.
- To ensure traceability of the sustainable palm oil in your products, choose from other supply chain options provided by the RSPO.

As palm oil is purchased on the world market, rather than directly from the producers, the RSPO has established a certification procedure and three marketing models for palm oil from sustainably cultivated palm oil plantations: segregation (physical separation of sustainable and normal palm oil streams), mass balance (controlled mixing of sustainable and "normal" palm oil), and the Book & Claim system.

Segregated: As the name suggests, this is certified palm oil that is physically separated from non-certified palm oil, all the way from the certified mill to the end user. This option guarantees that the end product contains CSPO.

Mass Balance: This option allows companies along the supply chain, such as traders or refiners, to mix the certified palm oil with non-certified to avoid all the costs of keeping the two entirely separate (as in Segregated).

GREEN PALM (BOOK AND CLAIM)

GreenPalm is a certificate trading programme, that allows consumers the flexibility to purchase sustainable palm oil certificates under the Book and Claim supply chain system. These certificates are issued to producers who are members of RSPO and certified to produce palm oil in a sustainable manner.

Under normal circumstances it is almost impossible for palm oil purchasers to know exactly where their oil has come from and how it has been produced. Palm oil supplies from different plantations, mills and even countries are intermingled at each stage of the production and delivery process. Unlike the segregated supply chain process that tends to be relatively more expensive, GreenPalm allows companies the flexibility to buy certificates at a cheaper price.

RSPO certified palm oil producers are invited to register a part of their output with the GreenPalm programme. They are awarded one GreenPalm certificate for each tonne of palm oil that has been sustainably produced. They can then put those certificates up for sale on the GreenPalm web based trading platform. Manufacturers or retailers can then bid for and buy those certificates on line, in order to be able to claim that they have supported the sustainable production of palm oil.

A range of food products for sale at a supermarket - mainly cakes, bread, and other baked goods, many of them contains a surprising amount of Palm Oil.

HOW DOES A COMPANY BENEFIT FROM USING SUSTAINABLE PALM OIL?

Sustainability is becoming a license to operate in many parts of the world, with increasing awareness among businesses regarding the need for sustainable raw materials as well as more sophisticated demands from the consumers, who care about the origin of their products. Multinationals adopting sustainable palm oil standards could influence the palm oil market considerably to fulfil their global responsibilities. Local companies that do not follow suit may easily be left behind in the changing landscape of the global market. This is particularly relevant for companies that are establishing productions overseas, as they will also be expected to adopt global sustainability standards for palm oil production.

By sourcing sustainable palm oil, companies can expect the following benefits:

- Assurance that business operations do not contribute to illegal activities in other countries
- Increased profile as a responsible business - one that actively works to decrease its role in environmental problem, such as deforestation and global warming
- Reduced reputational risk: In India, there will be increasing reputational risks to companies that do not move towards sustainability
- Assurance of a sustainable supply of palm oil into the future

Palm oil is still harvested entirely by hand.

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GLOBAL COMMITMENTS TO SUSTAINABLE PALM OIL ON THE RISE

The first shipment of certified sustainable palm oil arrived with much fanfare at Rotterdam in November 2008; however the early excitement turned to disappointment for the growers when it became obvious that the demand for CSPO by the buyers in EU was just a fraction of that anticipated. By mid 2009, only 15,000 tonnes of CSPO had been taken up by EU manufacturers against a supply of 1.5 mn tonnes, many of whom had earlier made public commitments to source only CSPO by 2015 or earlier. However, the launch of WWF's "Palm Oil Buyers' Scorecard had a tremendous effect on the uptake.

SUPPLY OF CSPO HAS INCREASED BY 250% FROM 2009 TO 2011

From 2009 to 2011 supply of CSPO has increased by 250% (1,357,511 metric tons in 2009 to 4,798,512 metric tons in 2011) while sales volume has grown by over 6 times, approximately 620% (343,857 metric tons in 2009 to 2,490,526 metric tons in 2011). According to the report, the year-on-year supply of CSPO in 2011 increased by 73%, reaching 4,798,512 metric tons compared to 2,773,567 metric tons in 2010, while year-on-year sales volume increased by a whopping 94%.[34]

Globally, many large corporations have already made commitments to use only certified sustainable palm oil by 2015. These include the world's largest retailer, Walmart, as well as food service companies like McDonalds and Unilever among others.

COMMITMENT FROM UNILEVER - THE SINGLE LARGEST BUYER OF PALM OIL

Among the food and consumer goods manufacturers, Unilever (which is the world's largest single buyer of palm oil) played a major role in shaping the debate. Besides providing the leadership for the Roundtable on Sustainable Palm Oil (RSPO) since its formation, Unilever worked with Greenpeace to support a moratorium on deforestation for palm oil in Indonesia and announced that it would source fully traceable palm oil by 2015 (Industry Week, 2008).[35] In December 2009, Unilever took a public stance against deforestation by suspending future purchases of palm oil from its Indonesian supplier, PT SMART (part of Sinar Mas Group) on the grounds of their alleged contribution to destruction and development of peat land (Unilever, 2009)[36]. A similar stand was taken against another supplier, PT Duta Palma in February 2010 (Koswanage, 2010).[37]

Unilever has already met its proposed 2015 commitment to purchase sustainable palm oil in 2012 itself through Green Palm Certificates.

Nestlé followed this approach in March 2010 by discontinuing supplies of palm oil from Sinar Mas following a Greenpeace campaign against "KitKat" (Hornby, 2010).[38]

AWARENESS IN INDIA - RSPO MEMBERS

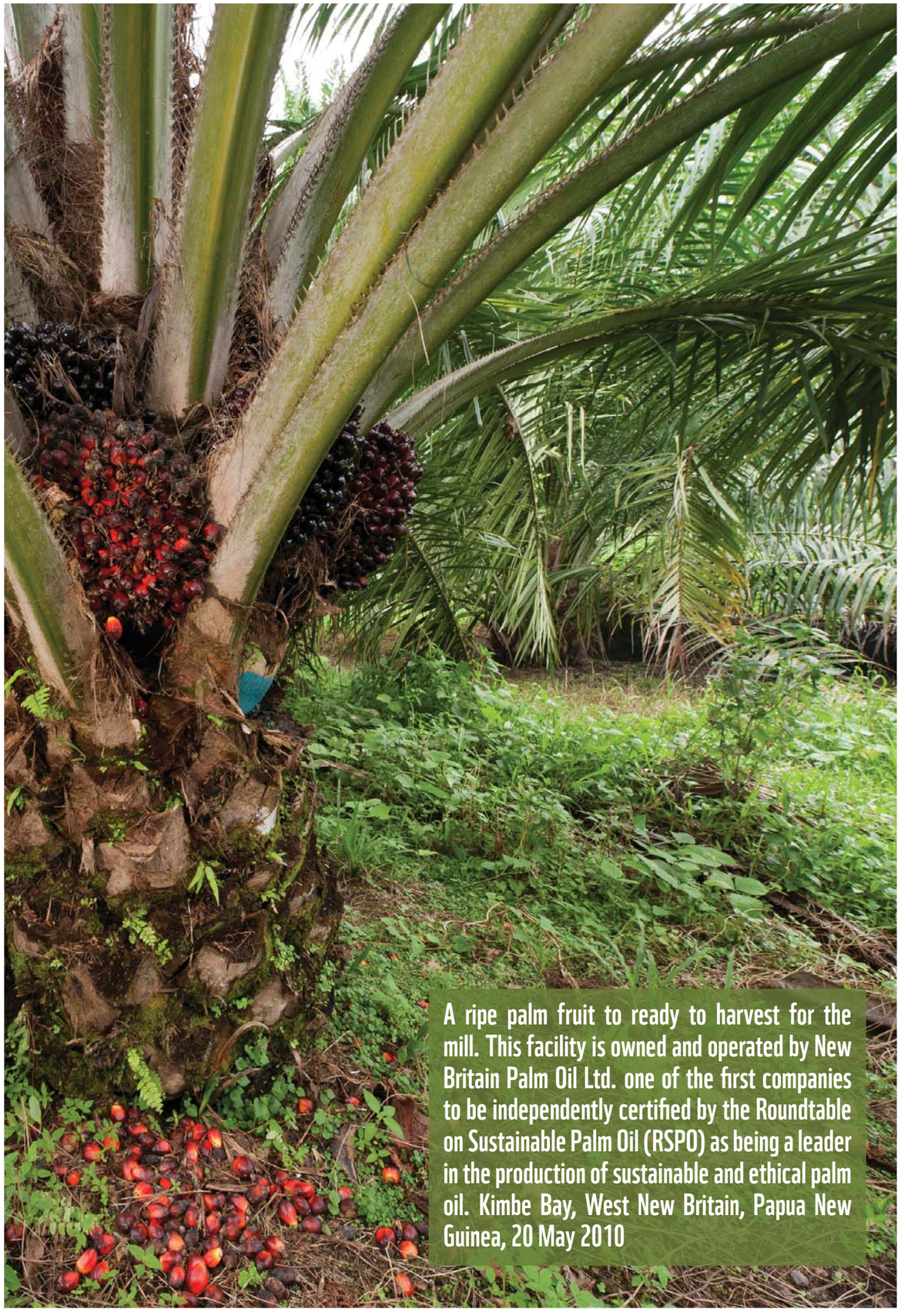
The level of awareness about procuring CSPO is limited in India, but has started to grow since February 2012. As of December 2012, 21 companies in India are registered, as members of the RSPO including Adani Wilmar, Godrej, Kamani Oil Industries, VVF and Ruchi Soya.

Name of the company	Member since	Membership sector
Godrej Industries Limited	11/09/2006	Palm Oil Processors and Traders
VVF Ltd	4/09/2008	Palm Oil Processors and Traders
Kamani Oil Industries Pvt. Ltd	20/05/2009	Palm Oil Processors and Traders
Adani Wilmar Ltd	25/06/2010	Palm Oil Processors and Traders
Subrahmanyeswara Agro Products Pvt Ltd	3/01/2012	Palm Oil Processors and Traders
K.T.V.Health Food Private Limited	2/02/2012	Palm Oil Processors and Traders
Kog-ktv Food Products (India) Pvt Ltd	2/02/2012	Palm Oil Processors and Traders
Emami Biotech Limited	15/03/2012	Palm Oil Processors and Traders
Galaxy Surfactants Ltd	15/03/2012	Palm Oil Processors and Traders
Ruchi Soya Industries Limited	6/04/2012	Palm Oil Processors and Traders
Triveni Oil Industries	6/04/2012	Organisations
Gemini Edibles & Fats India Private Limited	26/04/2012	Palm Oil Processors and Traders
K.P.Manish Global Ingredients Pvt. Ltd.	5/07/2012	Organisations
Officedge India Pvt. Ltd.	9/08/2012	Organisations
Jocil Limited	27/08/2012	Consumer Goods Manufacturers
Fine Organic Industries PVT.Ltd.	27/08/2012	Palm Oil Processors and Traders
Parisons Foods Private Limited	14/09/2012	Palm Oil Processors and Traders
Paras Chemcare Pvt. Ltd.	28/09/2012	Organisations
Universal Biofuels Pvt Ltd	10/12/2012	Palm Oil Processors and Traders
Pharmacos India	22/11/2012	Organisations
Liberty Oil Mills Limited	10/11/2012	Palm Oil Processors and Traders

RSPO MEMBERS - INDIA

A 'Sustainable Palm Oil Coalition' was formed in 2010, in India, to influence the government, to provide an incentive based platform to encourage imports of sustainable palm oil. This move is led by Hindustan Unilever, Godrej, Ruchi, VVF, Greenpeace and WWF-India.

By committing to source only certified sustainable palm oil or Green Palm certificates, Indian companies can take a step towards ensuring a future supply of sustainable palm oil, while also taking responsibility for the global impact of their imports on the environment and the climate. Many Indian businesses are starting to address sustainability as part of their core operations, leasing to sustainable palm oil featuring higher up in sustainability agenda.



A ripe palm fruit to ready to harvest for the mill. This facility is owned and operated by New Britain Palm Oil Ltd. one of the first companies to be independently certified by the Roundtable on Sustainable Palm Oil (RSPO) as being a leader in the production of sustainable and ethical palm oil. Kimbe Bay, West New Britain, Papua New Guinea, 20 May 2010

The global demand for palm oil is set to continue rising, prompting an increase in the global production. The versatility of the oil, including for production of bio fuels, has made palm oil the most favoured vegetable oil of the world. In India as well, since palm oil is a cheaper substitute to other oils and India's per capita consumption of edible oil (which is currently low) is set to rise in the near future, the consumption of this oil is only expected to increase.

With the mounting global demand, producing countries have resorted to increasing acreage under palm fruit, thereby putting a pressure on the forest cover in their respective countries. This has given rise to several environmental impacts including ecological degradation, loss of biodiversity, green–house gas emissions and unsustainable use of harmful pesticides.

Palm oil has significant importance in the global edible oil market and to Indian society. It also contributes to the economic development of the producing countries and to the sustenance of millions of people around the world. However, the negative environmental impacts of the existing unsustainable production practices in oil palm production also need to be addressed.

There is an urgent need to address these environmental pressures to help conserve highly eco- sensitive areas in the producing regions around the world. There is a need to adopt a holistic approach to transformation of the palm oil market towards sustainability, in a manner that it is economically, environmentally and socially viable.

On the production side, there is a need to subscribe to sustainable production practices as listed out under the RSPO. On the other hand, there needs to be a pull from the consumption side to scale up the consumption of sustainable palm oil, such as from demand markets such as India, China and EU. Voluntary (farmer, industry and civil society) initiatives and governmental policies will further provide the right impetus for a transformational change.

Large multinationals have demonstrated their support towards sustainable palm oil by adoption of new policies, primarily pertaining to procurement. India, being one of the largest consumers, can support the use of sustainable palm oil as well, by proactively participating in various initiatives like the RSPO and Green Palm and making commitments regarding the use of sustainable palm oil in the coming years. Although, there has been support from select corporates, further commitments from larger players, large traders/ importers, refineries and end users/ consumers would provide the much needed thrust to the adoption and usage of "sustainable palm oil".

"India is an influential and significant new economy for sustainable palm across the world. When India does adopt strategic policies towards Certified Sustainable Palm Oil, it will set a benchmark around the world from a global reputational perspective, as it clearly demonstrates the nation's commitment and contribution towards international sustainable endeavours. The RSPO is committed to continuing the momentum of engagement and collaboration with the government of India and directly with the industry. Our outreach and advocacy efforts India is one of our strategic pillars for 2012 – which is to accelerate CSPO uptake amongst current demand markets while penetrating major new markets for sustainable palm oil."

- Darrel Webber, Secretary General RSPO

Burning forest for palm oil plantation in Biological corridor, Riau, Indonesia.

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WWF'S SCORECARD 2011

Global Palm Oil commitments by companies under the RSPO				
Companies	**Country HQ**	**Sector**	**Commodity Committment (% / Year)**	**Scorecard score 2011**
AAK	Sweden	Consumer goods manufacturer	100% by 2015	7
Aigremont	Belgium	Consumer goods manufacturer	100% by 2015	7
Allied Bakeries (ABF)	United Kingdom	Consumer goods manufacturer	100% by 2014	9
Arla Foods	Denmark	Consumer goods manufacturer	100% by 2015	7
Arnott's	Australia	Consumer goods manufacturer	100% by 2015	4.5
Associated British Foods (ABF) (group level)	United Kingdom	Consumer goods manufacturer	100% by 2015	6.5
Aviko	Netherlands	Consumer goods manufacturer	100% by 2015	4.5
BASF Personal Care and Nutrition	Germany	Consumer goods manufacturer	100% by 2015	7
Biscuiterie de L'Abbaye	France	Consumer goods manufacturer	100% by 2010	7.5
Brioche Pasquier Cerqueux	France	Consumer goods manufacturer	100% by 2011	8
Burton's Foods	United Kingdom	Consumer goods manufacturer	100% by 2013	9
Cadbury (Kraft)	United Kingdom	Consumer goods manufacturer	100% by 2010	9
Cloetta	Sweden	Consumer goods manufacturer	100% by 2011	9
CSM	Netherlands	Consumer goods manufacturer	100% by 2015	7
Dairy Crest (Group)	United Kingdom	Consumer goods manufacturer	100% by 2015	7
Danone	France	Consumer goods manufacturer	100% by 2011	7.5
Devineau Bougies La Française	France	Consumer goods manufacturer	100% by 2011	9
Dragsbaek	Denmark	Consumer goods manufacturer	100% by 2014	5
DSM Nutritional Products	Netherlands	Consumer goods manufacturer	100% by 2013	9
Ecover	Belgium	Consumer goods manufacturer	100% by 2012	4.5
Ferrero	Italy	Consumer goods manufacturer	100% by 2015	4.5
Findus Group	United Kingdom	Consumer goods manufacturer	100% by 2015	9
Ginsters	United Kingdom	Consumer goods manufacturer	100% by 2012	8.5
Goodman Fielder	Australia	Consumer goods manufacturer	100% by 2015	7
Göteborgs Kex	Sweden	Consumer goods manufacturer	100% by 2009	9
H J Heinz	United Kingdom	Consumer goods manufacturer	100% by 2013	8
Henkel	Germany	Consumer goods manufacturer	100% by 2015	9
Iglo Group	United Kingdom	Consumer goods manufacturer	100% by 2011	9
Kao Corporation	Japan	Consumer goods manufacturer	100% by 2015	5.5
Karl Fazer	Finland	Consumer goods manufacturer	100% by 2012	8
Kerry Group	United Kingdom	Consumer goods manufacturer	100% by 2015	7
L'Oréal	France	Consumer goods manufacturer	100% by 2011	9
Lantmännen ek för	Sweden	Consumer goods manufacturer	100% by 2011	7
Levo	Netherlands	Consumer goods manufacturer	100% by 2015	6.5
Lindt and Sprüngli	Switzerland	Consumer goods manufacturer	100% by 2011	7
Lion Corporation	Japan	Consumer goods manufacturer	100% by 2015	5
Lotus Bakeries	Belgium	Consumer goods manufacturer	100% by 2011	6.5
LU France (Kraft Foods)	France	Consumer goods manufacturer	100% by 2010	7.5

Nestlé	Switzerland	Consumer goods manufacturer	100% by 2015	8
Norlander Zeelandia	Sweden	Consumer goods manufacturer	100% by 2015	4
Northern Foods (2 Sisters Food Group)	United Kingdom	Consumer goods manufacturer	100% by 2012	3.5
Nutreco International	Netherlands	Consumer goods manufacturer	100% by 2014	5
Nutrition et Santé	France	Consumer goods manufacturer	100% by 2011	9
Oriflame Cosmetics	Sweden	Consumer goods manufacturer	100% by 2012	8.5
Oscar (Paulig)	Denmark	Consumer goods manufacturer	100% by 2012	4.5
Palsgaard	Denmark	Consumer goods manufacturer	100% by 2015	4.5
Premier Foods	United Kingdom	Consumer goods manufacturer	100% by 2015	9
Raisio	Finland	Consumer goods manufacturer	100% by 2015	5.5
Reckitt Benckiser	United Kingdom	Consumer goods manufacturer	100% by 2015	5
Remia	Netherlands	Consumer goods manufacturer	100% by 2014	8
Royal Friesland Campina	Netherlands	Consumer goods manufacturer	100% by 2011	8
Royale Lacroix	Belgium	Consumer goods manufacturer	100% by 2015	5.5
Santa Maria (Paulig)	Sweden	Consumer goods manufacturer	100% by 2011	9
Saraya	Japan	Consumer goods manufacturer	100% by 2015	9
Smilde Foods (Royal Smilde)	Netherlands	Consumer goods manufacturer	100% by 2015	7
The Jordans and Ryvita Company (ABF)	United Kingdom	Consumer goods manufacturer	100% by 2012	9
Unilever	Netherlands	Consumer goods manufacturer	100% by 2015	8
United Biscuits	United Kingdom	Consumer goods manufacturer	100% by 2011	9
Vandemoortele	Belgium	Consumer goods manufacturer	100% by 2015	7
Warburtons	United Kingdom	Consumer goods manufacturer	100% by 2015	9
Yves Rocher	France	Consumer goods manufacturer	100% by 2010	9
PepsiCo, Inc.	USA	Food group	100% / 2015	
Cargill	US	Food Groups, Commodity Trader	100% / 2020	
McDonald's	USA	Foodservice	100% / 2015	
Johnson & Johnson	USA	Manufacturer	100% / 2015	
Kraft Global Snacks Business	US	Manufacturer	100% / 2015	
Mars	USA	Manufacturer	100% / 2015	
Proctor & Gamble	USA	Manufacturer	100% / 2015	
ASDA (Walmart)	United Kingdom	Retailer	100% by 2015	9
Axfood	Sweden	Retailer	100% by 2015	8
Boots Group	United Kingdom	Retailer	100% by 2014	9
C1000	Netherlands	Retailer	100% by 2015	2
Carrefour	France	Retailer	100% by 2015	8
Casino	France	Retailer	100% by 2010	6.5
Coles Supermarkets	Australia	Retailer	100% by 2015	4.5
Coop Switzerland	Switzerland	Retailer	100% by 2011	9
Delhaize Group	Belgium	Retailer	100% by 2015	4.5
E. Leclerc	France	Retailer	100% by 2015	6.5
ICA (Royal Ahold)	Sweden	Retailer	100% by 2015	9
IKEA	Sweden	Retailer	100% by 2011	8
Marks and Spencer	United Kingdom	Retailer	100% by 2015	9
Metcash Trading	Australia	Retailer	100% by 2015	4.5
Migros	Switzerland	Retailer	100% by 2015	9
Morrisons	United Kingdom	Retailer	100% by 2015	8
Rema1000 (Reitan)	Denmark	Retailer	100% by 2015	3.5
REWE Group	Germany	Retailer	100% by 2013	6.5
Royal Ahold	Netherlands	Retailer	100% by 2015	9
Sainsbury's	United Kingdom	Retailer	100% by 2014	8
Superunie	Netherlands	Retailer	100% by 2015	3.5
Tesco	United Kingdom	Retailer	100% by 2012	8
The Body Shop (L'Oreal)	United Kingdom	Retailer	100% by 2011	9
The Co-operative Group UK	United Kingdom	Retailer	100% by 2011	9
Waitrose	United Kingdom	Retailer	100% by 2012	9
Walmart	US	Retailer	100% / 2015	
Woolworths	Australia	Retailer	100% by 2015	7

Note: There are 21 Indian companies who are currently members of the RSPO such as Adani Wilmar Ltd, Godrej Industries Limited, VVF Ltd Mumbai, Kamani Oil Industries Pvt. Ltd but no commitments have been received for sustainable palm oil usage from these companies in India.

THE SCORECARD:

WWF assessed companies on several aspects related to their commitments to, and use of sustainable palm oil. As with the 2009 Scorecard, we evaluated company performance based on publicly available data (including websites and corporate sustainability reports, as well as the annual reports required by the RSPO from its members) in relation to the four questions:

1. Is the company a member of the RSPO and is annual reporting up to date? (2 points)
2. Does the company have a policy on sustainable palm oil—specifically a commitment to source 100 per cent RSPO-certified palm oil by 2015 or earlier? (1 point)
3. Is the company disclosing total volumes of palm oil used/bought? (1 point)
4. Is the company using any certified sustainable palm oil or buying any Book and Claim certificates? What proportion of the company's total palm oil use/sales are RSPO-certified palm oil in 2010-2011 (irrespective of which supply chain option the company is using), and is the company disclosing volumes used? (5 points)

1. Ibid.
2. Ibid
3. USDA Foreign Agriculture Services
4. Ibid
5. Ibid
6. FAO Statisics
7. USDA Foreign Agriculture Services
8. Ibid
9. Ibid
10. Ibid
11. Ibid
12. Ministry of Consumer Affairs, Food and Public Distribution
13. Ministry of Agriculture and USDA FAS
14. Ministry of Agriculture and Indiastat
15. Ibid
16. Report on GPDP Project in Edible Oil Industry in India, Asian Productivity Organization
17. Indian Edible Oil Industry, India Law offices(ILO)
18. Euromonitor & Industry discussion.
19. USDA FAS and FAO Statistics
20. UN Comtrade
21. www.palmoilhq.com.
22. Director of Vanaspati, Ministry of Consumer Affairs.
23. Department of Agriculture and Cooperation, Ministry of Agriculture.
24. www.rspo.com
25. G.R. van der Werf, D. C. Morton, R. S. DeFries, J. G. J. Olivier, P. S. Kasibhatla, R. B. Jackson, G. J. Collatz and J. T. Randerson (Nov 2009), *CO2 emissions from forest loss,* Nature Geoscience 2 (11): 737–738.
26. Global Forest Resources Assessment 2010, FAO
27. G.R. van der Werf, D. C. Morton, R. S. DeFries, J. G. J. Olivier, P. S. Kasibhatla, R. B. Jackson, G. J. Collatz and J. T. Randerson (Nov 2009), *CO2 emissions from forest loss,* Nature Geoscience 2 (11): 737–738.
28. Uryu, Y. And 15 co-authors. 2008, *Deforestation, forest degradation, biodiversity loss and CO2 emissions in Riau, Sumatra, Indonesia*, WWF Indonesia Technical Report.
29. www.greenpalm.org
30. G G.R. van der Werf, D. C. Morton, R. S. DeFries, J. G. J. Olivier, P. S. Kasibhatla, R. B. Jackson, G. J. Collatz and J. T. Randerson (Nov 2009), *CO2 emissions from forest loss,* Nature Geoscience 2 (11): 737–738.
31. Hooijer, A., Silvius, M., Wosten, H. And Page, S.2006, *Peat-CO2: Assessment of CO^2 emissions from drained peatlands in SE Asia*, Delft Hydraulics report Q3943.
32. *Guidelines for the Implementation of the ASEAN Policy on Zero Burning*, The ASEAN Secretariat, 2003
33. Press statement, *Call for immediate ban of paraquat and Class 1 pesticides and progressive ban of highly hazardous pesticides in oil palm plantations*, Pesticides Action Network Asia Pacific, November 2009.
34. www.rspo.org
35. Ibid
36. *Unilever backs moratorium on palm oil deforestation in Indonesia*, Industry Week, May 2008
37. Press release, *Unilever takes a stance against deforestation*, 11 December 2009. www.unilever.com and *How to establish a moratorium on deforestation for palm oil in Indonesia?, Briefing* Paper, Unilever.
38. Koswanage, N, *Unilever stops buying palm oil from Indonesian planter,* Reuters, February 2010
39. Hornby, C., *Nestle drops palm oil supplier after report,* Reuters, March 2010

ABOUT
WWF-INDIA

WWF-India is one of the largest conservation organisations engaged in wildlife and nature conservation in the country. Established as a Charitable Trust on November 27, 1969, it has an experience of over four decades in the field. Its mission is to stop the degradation of the planet's natural environment, which addresses through its work in biodiversity conservation and reduction on humanity's ecological footprint.

A challenging, constructive, science-based organisation WWF addresses issues like the survival of species and habitats, climate change and energy, sustainable forest management, water resources/ river basin management, sustainable agriculture as well as marine and freshwater conservation. The programmes work across sector and regions in various parts of the country.
In addition to conservation of biodiversity through field work WWF-India also aims to transform the policies and practices of key industrial sectors to reduce their ecological footprint and develop innovative sustainable solutions.

WWF-India has identified Palm Oil as a priority commodity and is looking to influence the market towards sustainable consumption, in collaboration with key players.

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WWF-India Secretariat
172-B Lodi Estate
New Delhi 110003
Tel: 011 4150 4814 Fax: 011 4150 4779