

# Responsible Business Practices in the Indian Palm Oil Sector

Prepared by:



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**LIST OF ABBREVIATIONS**

Abbreviation	Description
ASTM	American Society for Testing and Materials
BDA	Bio Diesel Association
CPKO	Crude Palm Kernel Oil
CPO	Crude Palm Oil
CRB	Centre for Responsible Business
CSPO	Crude Sustainable Palm Oil
DOPR	Directorate of Oil Palm Research
EN Standards	European Standards maintained by European Committee for Standardization
FFA	Free Fatty Acid
FFB	Fresh Fruit Brunches
GDP	Gross Domestic Product
Green Palm	An RSPO certificate trading programme, which end users can purchase certificates from RSPO certified producers equivalent to the volumes of sustainable palm oil, palm kernel oil and palm kernel meal used in end products
INR	Indian Rupees
MNRE	Ministry of Natural Resource and Energy
NGO	Non-Government Organization
OMC	Oil Marketing Companies
OPAE	Oil Palm Area Expansion
Palm Olein	At the first stage of fractionating, palm oil is split into two products: liquid palm olein and solid palm stearin. The fluid part of pure palm oil, liquid palm olein is naturally liquid at room temperature in warm climates. Widely used for frying foods, it blends well with other vegetable oils and is valued for its resistance to oxidation and the long shelf life it lends to foods fried in it
Palm Stearin	Solid palm stearin is the solid part left after liquid palm olein is

Abbreviation	Description
	removed during the splitting process. As its name implies, the solid consistency of palm stearin makes it useful in the production of margarine and shortening and in baked goods requiring the use of hard fats
PFAD	Palm Fatty Acid Distillate
PKO	Palm Kernel Oil
RBD	Refined, Bleached, Deodorized
RKVY	Rashtriya Kisan Vikas Yojana
RSB	Roundtable on Sustainable Biomaterials
RSPO	Roundtable on Sustainable Palm Oil
SEA	Solvent Extraction Association
VAT	Value Added Tax
WWF	World Wide Fund for Nature

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## EXECUTIVE SUMMARY

This report captures the dynamics of the palm oil sector in India. It studies the current processes, practices and trends in the business and suggests ways to make the sector sustainable in the long run. The points below summarise the key elements of the report.

- **India's growing demand for palm oil:** India is the biggest buyer of vegetable oils in the world. The rising urban population, changes in consumption patterns and limited domestic production have led to India's increasing imports of edible oils. With an estimated import of around 10.40 million metric tonnes in 2012-13, India's dependence on import of edible oils has increased to around 61 percent of its domestic consumption. Being the cheapest edible oil available in the Indian market, palm oil has become the most consumed edible oil in India. In 2012-13, palm oil constituted 50 percent of the total edible oil consumed in India and 81 percent of total edible oil imports into India. An estimated use of 8.67 MMT during the year 2012-13 in India represents approximately 20 percent of the total global trade. The corresponding figures for China and the EU are 16 percent and 14 percent, respectively. India is increasingly playing an important role in the demand and consumption of palm oil.
- **Palm oil sustainability concerns:** While global demands and consumption of palm oil are rising steadily, several sustainability related concerns in the production, sourcing and usage of palm oil, as well as palm derived by-products are also on the rise. Palm oil plantations in Malaysia and Indonesia have been identified as key drivers of deforestation and biodiversity loss in those countries. In general, India's global image around sustainability issues is not very encouraging as enforcement of environmental laws in the country is generally thought to be uneven. In such a scenario, being the largest palm oil buyers, Indian companies linked to the supply chains in these countries are also being linked to these negative environmental impacts. Sustainability standards are one of the tools that companies can use to ensure the sustainability of their supply chains. Roundtable on Sustainable Palm Oil (RSPO) is the initiative by the global palm oil sector striving to address sustainability related concerns of the sector. With its 1000 plus members, RSPO is leading the sustainability agenda in the palm oil sector and has achieved success in certifying around 14 percent of palm oil being traded worldwide as 'sustainable'. Roundtable on Sustainable Biomaterials (RSB) is another multi stakeholder initiative working to ensure the sustainability of biomass and biomaterial production and processing. Aligning themselves with sustainable initiatives shows responsibility on the part of Indian companies and provides them the opportunity to ensure that their palm oil supplies are from sustainable sources and are not linked to deforestation and biodiversity loss.
- **Palm oil industry in India and its sustainable uptake:** Indian companies form the majority of players in the palm oil supply chain in India. The large multinational Fast Moving Consumer Goods (FMCG) companies that have been strong proponents of sustainable palm oil are mainly at the end of supply chain and use palm oil (domestically produced or imported) that has already been refined in India. Therefore, they do not play much of a role in deciding the origin of

the crude palm oil and whether it has been sourced from a sustainable source. Furthermore, the research has revealed that most Indian firms are focused on short-term financial growth rather than long-term sustainability. The premium associated with sustainable palm oil is a barrier to uptake. Furthermore, India is yet to catch up with the global trend of associating brands with their green footprints as Indian industry presently does not place much value on developing strong brand identities in the field of sustainability. Many Indian businesses, although large and often global in presence, are not yet 'brands', as such, and therefore taking leadership on sustainability commitments for global positioning is not a strong priority. Suffice to say that much remains to be done to strengthen India's image globally on sustainability issues.

- **Palm oil by-products and opportunities for sustainable biodiesel production:** India is an energy deficit nation. With import of crude oil accounting for about 81 percent of the total oil consumption in the country India is increasingly becoming dependent on crude oil imports to meet its growing demand for liquid fuels. This demand is expected to dramatically rise in the future. As the fourth largest global contributor to carbon emissions, the Government of India has recognized the contribution that biofuels can make towards meeting part of India's energy needs and reducing the carbon intensity of its energy demand. Palm Fatty Acid Distillate (PFAD) is a by-product produced from the physical refining of palm oil. PFAD, traditionally used in the soap making and as raw material for the oleo chemical industry, is an effective feedstock for the production of biodiesel. For companies in India committed to using sustainable palm oil in their supply chain, there is an opportunity to produce sustainable biodiesel from the PFAD of the certified palm oil supply chain.
- **Assessing the potential for scaling up the uptake of sustainable palm oil in India:** It has emerged that Indian companies have the potential to commit to the use of certified sustainable palm oil.
  - There are fragmented segments within the larger value chains that have no or little awareness of issues related to sustainability or sustainable initiatives such as RSPO, RSB and so forth. This means there is a great potential for capacity building if these sustainability standards initiatives can further penetrate the Indian palm oil sector.
  - The majority of the respondents felt that currently there is no demand for sustainable palm oil in India as evidenced by the purchasing behavior of importing and processing companies. If customers demand sustainable products, then companies are more likely to offer them and pass on the cost onto the customer. However, for this to materialize, a market first needs to be created.
  - Palm oil derivatives, specifically a low-cost feedstock known as PFAD, can also be used for the production of biodiesel. If PFAD used for biodiesel production comes from a sustainable source (e.g. is RSPO certified), biodiesel then there is an opportunity for the biodiesel to obtain RSB certification. The palm oil industry in India could then export biodiesel to Europe at remunerative prices, where there is a strong demand for sustainable biofuels. There is good opportunity for biodiesel production from PFAD in India. As per the industry estimates, the total consumption of palm oil in India during the year 2012-2013 was around 8.67 million tonnes. Based on this estimate, India has



the potential to produce about 435,000 MT biodiesel from PFAD annually.

- **Recommendations:** Based on this rapid assessment of the Indian palm oil supply chain, it is recommended that in order to promote sustainability in the palm oil sector there is a need to focus around the following strategic areas:
  - **Ensuring the sustainability of domestic production:** Currently at around 0.3 MMT per annum, Indian domestic production is insufficient to meet palm oil demand in the country, leading to India's dependence on imports of palm oil from Indonesia and Malaysia. To address this, the Government of India has drawn up a strategy to promote large-scale palm oil cultivation in the country through a special programme on Palm Oil Area Expansion. However, the domestic palm oil industry needs to adopt a credible mechanism to demonstrate that the growth in domestic production of palm oil is not promoted at the cost of the environment and that stakeholders follow sustainable (environmental & social) business models. In this scenario, organizations that have sustainability at the forefront of their agenda, such as RSPO and RSB, will play important an important role.
  - **Increasing demand for RSPO certified products:** Palm oil in India, termed as poor man's oil, is highly price sensitive. As a result, pricing takes precedence over sustainability concerns. Lack of local demand for sustainable palm oil offers little incentive for supply chain actors to engage in the sourcing of certified palm oil as this would place them at a severe commercial disadvantage in the current market scenario. Innovative solutions such as developing consumer awareness, marketing of palm oil as a sustainable brand among the middle and higher-class consumers, promoting higher quality palm oil (e.g., super olein<sup>1</sup>), setting time bound targets for RSPO members, and introducing incentives for the promotion and use of sustainable palm oil can also be effective tools to promote the uptake of RSPO certified palm oil.
  - **Integrating sustainable biofuels into the palm oil chain:** Total consumption of palm oil in India during the year 2012-2013 presents the potential to produce about 435,000 MT biodiesel from the palm oil by-product PFAD. The potential for RSB certified PFAD derived biodiesel production should be a driver of certified more sustainable palm oil chain in India because there are good opportunities for Indian companies to cater to the growing demand for sustainable biofuels in Europe.
  - **Increasing the efficiency of certification in India:** High certification costs for sustainability initiatives was identified as another major concern contributing to poor uptake of these certification schemes. The study indicated that there is an opportunity to increase the uptake of sustainability certifications in the palm oil sector provided certification costs are made more affordable to the industry actors.

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<sup>1</sup> Organic palm super olein is obtained from the liquid fraction. Organic Palm Olein is a preferred choice and quite beneficial for frying food. Apart from its high quality performance, the added advantage is it does not alter the taste or flavour of fried food as it does not have any distinct fragrance. Moreover, it leaves the meal completely dry with no dripping of oil. (<http://superrefinedpalmolein.com/>)

It is therefore evident that there is ample scope to promote sustainability in the palm oil sector in India. Constructive engagement of various stakeholders such as RSPO, RSB, ISEAL and CRB with the palm oil industry actors in India can be very helpful in furthering the journey of the palm oil industry in India towards sustainability. Below are proposed some broad roles for these organizations in this collaborative engagement:

### **RSPO**

- RSPO should actively engage with the retailers and brand owners in India to ensure their buy-in on the concept of sustainability and consider making RSPO a 'market-facing' label. There is also an urgent need to increase awareness of standards domestically, and the RSPO programme in particular among stakeholders.
- RSPO should design new models of engagement in such a way that businesses can benefit by adopting such schemes, unlike the existing model in which it is difficult for businesses to recover the cost of certification.
- In order to bring visibility to RSPO certification and encourage businesses to adopt sustainable practices in their operations, RSPO should demonstrate the impact its members have by integrating sustainability principles and criteria into their businesses and operations.
- In the Indian context, it is vital to overcome the consumer perception that 'sustainable' automatically implies 'more expensive'. Therefore, RSPO should target consumer-facing companies, which are important drivers for changing the mind-set of Indian consumers, and communicate a clear message on sustainable palm oil to consumers.

### **ISEAL AND CRB**

- ISEAL and CRB could identify a lobby platform through which palm oil stakeholders in India can put pressure on government to start levying a green tax/cess on the import of non-sustainable crude and refined palm oil. Resources mobilized through this green tax can be further channeled to promote green improvements within palm oil supply chain in the country.
- CRB and ISEAL can play an advisory role on how commercial banks, both private and state-owned, could cooperate with the Government of India, through the Ministry of Environment and Ministry of Finance, in implementing economic incentives or instruments based on the International Finance Corporation's (IFC) Sustainability Framework (this will be discussed further in Chapter 3 of this report).
- CRB and ISEAL should look at educating large retailers and other big department stores in India about issues around sustainable palm oil and encouraging retailers to promote the use of sustainable products through strategic marketing to the educated middle and rich classes

of society. Such products should be easily available and should be placed in prominent places in stores/markets to encourage consumer uptake.

- CRB should create a policy and programme framework at the industry level to support companies to manage the environmental and social impacts of their operations and help them learn from the experiences of others and adopt best practices.

**RSB**

- RSB, together with ISEAL and CRB, should promote a platform for dialogue between the biofuel industry stakeholders, including the government, to encourage collaborative programmes that will enable biodiesel producers in India to put sustainability in the core of their operations.
- RSB should help mitigate slow biofuel adoption in India by providing local producers with access to markets through its certification scheme

## Chapter 1

### 1.0 RESEARCH RATIONALE AND METHODOLOGY

#### 1.1 INTRODUCTION

Palm oil has emerged as the main source of vegetable oils globally in the recent years. It has become the most economic crop in the global vegetable oil market and is increasingly being used for food and industrial applications. Derivatives of palm oil are also being used in cosmetics, soaps, detergents, shampoo and biodiesel. India is the largest market for palm oil in the world. The estimated global use of palm oil was 8.67 million metric tonnes (MMT) during 2012-13<sup>2</sup>, of which approximately 20 percent was consumed by Indians, which is more than China (at 16 percent) and the EU (at 14 percent). Therefore, India is increasingly playing an important role in the demand and consumption of palm oil. Today palm oil is the cheapest edible oil available in the Indian market. Consequently, the share of palm oil in total edible oil consumption in India has gone up to 50 percent in 2012-13 from mere 29 percent in 2001-02<sup>3</sup>.

The rising urban population, changes in consumption patterns and increasing income levels are major demand drivers of edible oil consumption in India. However, India's domestic production of edible oils, which is increasing on an average of 0.1 Million Metric Tonnes (MMT) per year, is insufficient to meet this consumption growth— estimated to be increasing at an average rate of 0.66 MMT per year. As a result, 61 percent of the edible oil requirements in India are met by imports<sup>4</sup>. Palm oil, with an estimated import of 8.29 MMT during the year 2012-13<sup>5</sup>, constituted about 80 percent of total edible oil imports in the country during the year.

While global demand and consumption of palm oil is rising steadily, several sustainability related concerns in production, sourcing and usage of palm oil and palm-derived byproducts are also on the rise. Global initiatives such as the Roundtable on Sustainable Palm Oil (RSPO) and the Roundtable on Sustainable Biomaterials (RSB) continue to strive to address the sustainability related concerns of the sector. With its 1,000 plus members, RSPO is leading the sustainability agenda in the palm oil sector and has achieved success in certifying around 14 percent of palm oil being traded worldwide as 'sustainable'. Being the largest world market for palm oil, India has the potential to play an important role in promoting sustainability in production, sourcing and usage of palm oil and palm derived byproducts.

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<sup>2</sup>Source: GGN Research, *Journey of Palm Oil in India & Way Forward*, presented at Globoil India at Mumbai, September 2013

<sup>3</sup>Ibid.

<sup>4</sup>Ibid., p. 5.

<sup>5</sup>Source: Solvent Extractors' Association of India

## 1.2 CONTEXT

In view of the increased awareness of environmental problems, the focus on sustainable development has grown in recent times, particularly with respect to the activities that degrade the environment and adversely affect communities. India is among the largest economies in the world and this is surely a cause for celebration. However, this growth brings with it rising consumption demands in India that make it impossible to ignore the sustainability concerns related to this growth. One such sector where India's increasing demand is rapidly raising sustainability concerns is palm oil.

In recent years several reports have captured various dimensions of the palm oil industry, including the concerns of the Indian palm oil industry. Notable among these reports are "Oil Palm Sector in India" and "Palm Oil Market and Sustainability in India" by the World Wide Fund for Nature (WWF) India, "Frying the Forest" by Greenpeace India and "Vision 2030" by the Directorate of Oil Palm Research (DOPR). While the WWF reports broadly focus on production, import, consumption scenario and other trade related aspects of the palm oil industry in India, the Greenpeace report looks at palm oil plantations in Malaysia and Indonesia as key drivers of deforestation and biodiversity loss, and maps out major Indian companies linked to the supply chains in these countries. The report advocates that, as the largest user of palm oil in the world, India has an opportunity and responsibility to ensure that its palm oil comes from sustainable sources and is not linked to rainforest and peat land destruction. In view of these, the DOPR report focuses on developing domestic production of palm oil and proposes a 10-point strategy to enhance the efficiency and effectiveness of palm oil research to achieve 3-4 million metric tonnes of palm oil production in India by 2030 (from the existing 0.1 million metric tonnes).

While these reports have mapped out the Indian palm oil value chain and documented its performance, there is a gap in terms of exploring the main reasons as to why Indian companies are not increasing their uptake of sustainable palm oil, despite 28 key Indian companies being registered as members of RSPO<sup>6</sup>. The WWF report suggests that the actual sourcing of certified sustainable palm oil in India remains low. While in recent years several governments in the developed world and many large multinational companies have set targets and taken steps to source their palm oil more sustainably, such commitments are less visible in India.

This report builds on the extant information on the palm oil sector in India and makes a rapid assessment of sustainability concerns within the sector. It identifies various factors responsible for the non-commitment of Indian companies to the use of certified sustainable palm oil. In addition, this report also explores the potential for the sustainable use of palm oil derivatives. As most of the palm oil imported into India arrives in the unprocessed (crude) form, the refining process produces palm oil as well as other by-products, including PFAD, a low cost feedstock used for the production of biodiesel. If PFAD used for producing biodiesel is certified by RSPO as being sustainable, the biodiesel thus produced,

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<sup>6</sup>From RSPO website ([http://www.rspo.org/content.php?member-name=&member-search-submit=Search&lang=en&pagename=rspo\\_members&member-country=India&member-category=&member-type=](http://www.rspo.org/content.php?member-name=&member-search-submit=Search&lang=en&pagename=rspo_members&member-country=India&member-category=&member-type=)) accessed on 14 November 2013

can further be certified by the RSB as being sustainable too. This will open up a lot of opportunities for exports of sustainable biodiesel to the European countries, earning the Indian companies good profits and giving them access to a huge market.

The report is divided into two sections. The first section discusses sustainability concerns related to the use of palm oil by major Indian companies and the second section examines the potential for the production of sustainable biodiesel using PFAD.

### **1.3 RESEARCH APPROACH**

Centre for Responsible Business (CRB) works to promote awareness and uptake of sustainability standards through research, capacity building and stakeholder engagements. It facilitates the implementation of standards systems as tools to mainstream sustainability. By adopting standards systems and promoting certified palm oil and certified palm derived by-products, Indian companies sourcing palm oil, as well as other Indian stakeholders, can be important actors in the positioning of India as an emerging economy that is serious about sustainability and standards. CRB has therefore conducted this study with support from ISEAL to develop a clear picture of the sustainability related issues in the sector and identify value propositions to promote the uptake, sourcing and use of certified palm oil and palm derived by-products in India. The approach of this study has been to:

- Map the palm oil supply chain in India – all the way to the end-users of palm oil and its by-products - and understand and evaluate the bridges between the food and cosmetics and biofuels sectors.
- Explore the level of awareness on sustainability related concerns among Indian palm oil producers, refiners, processors, packagers, retailers, policymakers and other stakeholders.
- Identify the main barriers limiting the import and use of certified palm oil in India.
- Explore how Indian biofuels producers could use PFAD as a feedstock for sustainable biodiesel production.
- Identify value propositions to incentivize Indian companies and retailers to promote and source certified palm oil and certified palm derived by-products.
- Identify possible actions that CRB, RSB, RSPO and ISEAL Alliance could individually or collectively undertake to relieve the bottlenecks in promoting sustainability in the palm oil sector.
- Work with and handhold those companies and associations who are attempting to use/promote sustainable palm oil in getting their accreditations and introducing them to other market players, so that they can mutually support each other and grow in their respective fields.

### **METHODOLOGY**

Previous reports have adequately captured the statistics and institutional analysis of palm oil sourcing in India. Therefore, this rapid assessment is aimed at building on and augmenting existing information by carrying out a series of stakeholder interviews. This assessment brings together data and information

from a wide range of Indian businesses involved in the palm oil supply chain, as well as government institutions and other relevant sources. The assessment included ten interviews and meetings from a random list of palm oil industry stakeholders in India representing palm oil importers, refiners, traders, retailers, government institutions, biodiesel manufacturers and industry associations. These interviews were further complemented by four key informant interviews to obtain broader insights into the industry challenges, as well as the policy perspectives.

The research methodology included two main approaches towards data and information collection:

- i. Systematic interviews and questionnaires administered to a sample of companies involved in the palm oil supply chain and biodiesel production in India. This was undertaken to collect stakeholder views, including those of key informants, by conducting interviews and meetings using structured questionnaires and open-ended questions.
- ii. Desk based collection and review of data and information available in the public domain.

An initial list of palm oil industry stakeholders in India was drawn based on:

- WWF and Greenpeace reports;
- RSPO member list;
- Expert knowledge of researchers of the palm oil sector in India;
- Discussions with key industry actors; and
- Discussions about palm oil with government institutions.

Out of this list, ten stakeholders were identified to be consulted for this research. They included six representatives from the palm oil industry and four representatives from the biodiesel industry. As the focus was primarily on identifying reasons for non-commitment to sustainable palm oil, four of the six representatives from the palm oil industry were chosen from amongst the RSPO members in India. A list of stakeholders covered during the study is given in the Annex 3.

A series of meetings were held with the identified key stakeholders during the course of study, including in-person meetings and telephone discussions. The meetings with stakeholders focused on understanding their palm oil usage, knowledge, attitude and practices concerning sustainability and certification in the palm oil sector. Similarly, the meetings with biodiesel stakeholders covered aspects related to the use of PFAD as feedstock for biodiesel production vis-à-vis its policy perspectives.

In addition to the stakeholder engagement, the desk based review of available data and statistics for the palm oil and biodiesel industry included:

- Publicly available reports – produced by International agencies, NGOs, industry associations and other research organizations;
- Trade data – from government sources, national and international research agencies; and
- Internet resources and other media articles.

Initial findings from the study were presented in a validation workshop, organized on December 9, 2013 in Mumbai, with industry stakeholders and sector specialists.

### **1.5 LIMITATIONS TO THE STUDY**

This report reflects a rapid assessment conducted between October-November 2013 and further desk - based updates to information and figures. The report is based on the conditions encountered and information received from the interviewees during this period.

One of the major constraints observed during the field interviews was the unwillingness of representatives from most of the companies to talk about the sustainability issues in their supply chain. Respondents were largely apprehensive and the research team felt that most of the responses were carefully guarded.

Another constraining factor was the limited availability of palm oil trade related data across the value chain in the public domain. As palm oil is a FMCG product, there are many players involved in its manufacture, processing, distribution and sale, therefore making it difficult to study patterns related to its uptake. There is almost no information available in the public domain on its distribution across various segments. It has been difficult to derive meaningful data even from the websites and annual reports of major companies in the palm oil sector.

Some of the views expressed in this report are those of the representatives of participating organizations only. Quantitative data in the public domain has been used and where quantitative data was not available, inputs have been completed using qualitative information.



Chapter 2

2.0 ANALYSIS OF PALM OIL SECTOR SUPPLY CHAIN IN INDIA

2.1 PALM OIL OVERVIEW

India is the biggest buyer of vegetable oils in the world. A rising urban population, changes in consumption patterns, and domestic production not keeping up to domestic demand are major contributors to India’s increasing import of edible oils. With an estimated import of around 10.40 MMT in 2012-13, India’s dependence on import of edible oils has increased from 41 percent in 2001-02 to around 61 percent in 2012-13, as depicted in Figure 1 below.

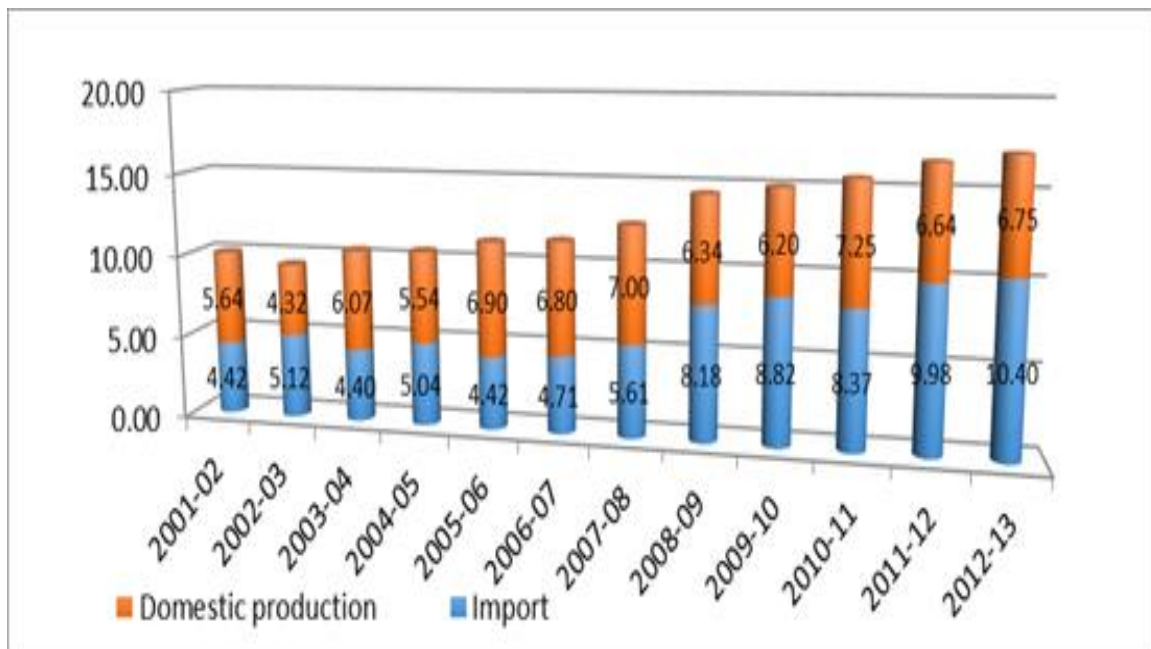


Figure 1: Overall production and import of edible oils in India (in MMT)

Another notable change during this period has been the consumption pattern of edible oils in India. Palm oil is now the most widely consumed vegetable oil in India. With an estimated use of 8.67 MMT during the year 2012-13, palm oil accounted for 50 percent of the total edible oil consumption in India - a major change as compared to 29 percent in 2001-02<sup>7</sup>, as depicted in figures 2 and 3 on following page.

<sup>7</sup>Source: GGN Research, *Journey of Palm Oil in India & Way Forward*, presented at Globoil India at Mumbai, September 2013

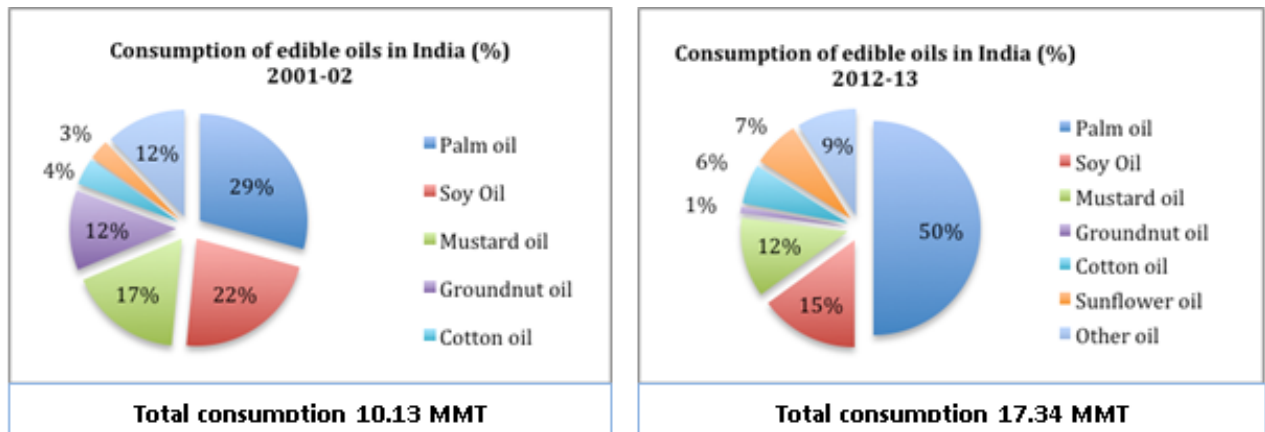


Figure 2 & 3: Consumption pattern of edible oils in India

Being the cheapest edible oil available in the Indian markets, palm oil imports reached 8.29 MMT during the year 2012-13<sup>8</sup> and constituted about 81 percent of total edible oil imports in the country during the year. Figure 4, below compares the annual growth in imports of palm oil to other edible oils in the country from 1997 to 2013. The percentages in the table below refer to the percentage of palm oil/other oil to the total edible oils imported.

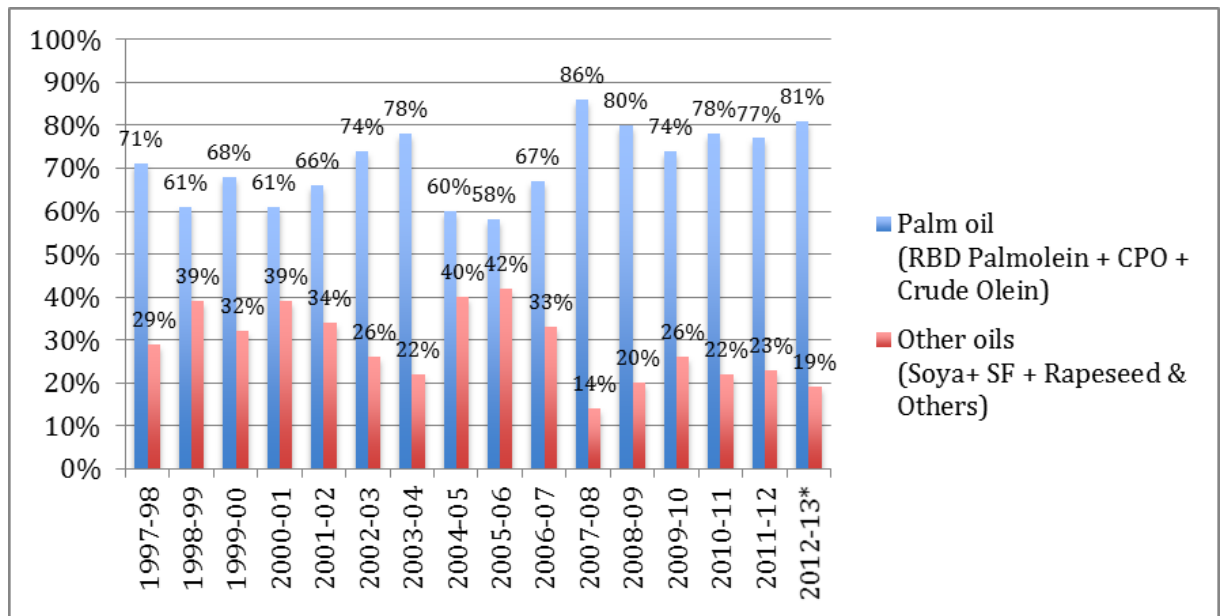


Figure 4: Import trend of palm oil and other edible oils in India (in percentage)

<sup>8</sup>Source: Solvent Extractors' Association of India

## 2.2 UNDERSTANDING THE PALM VALUE CHAIN

The palm oil supply chain in India can be broadly classified into the three segments as outlined in Figure 5 below:

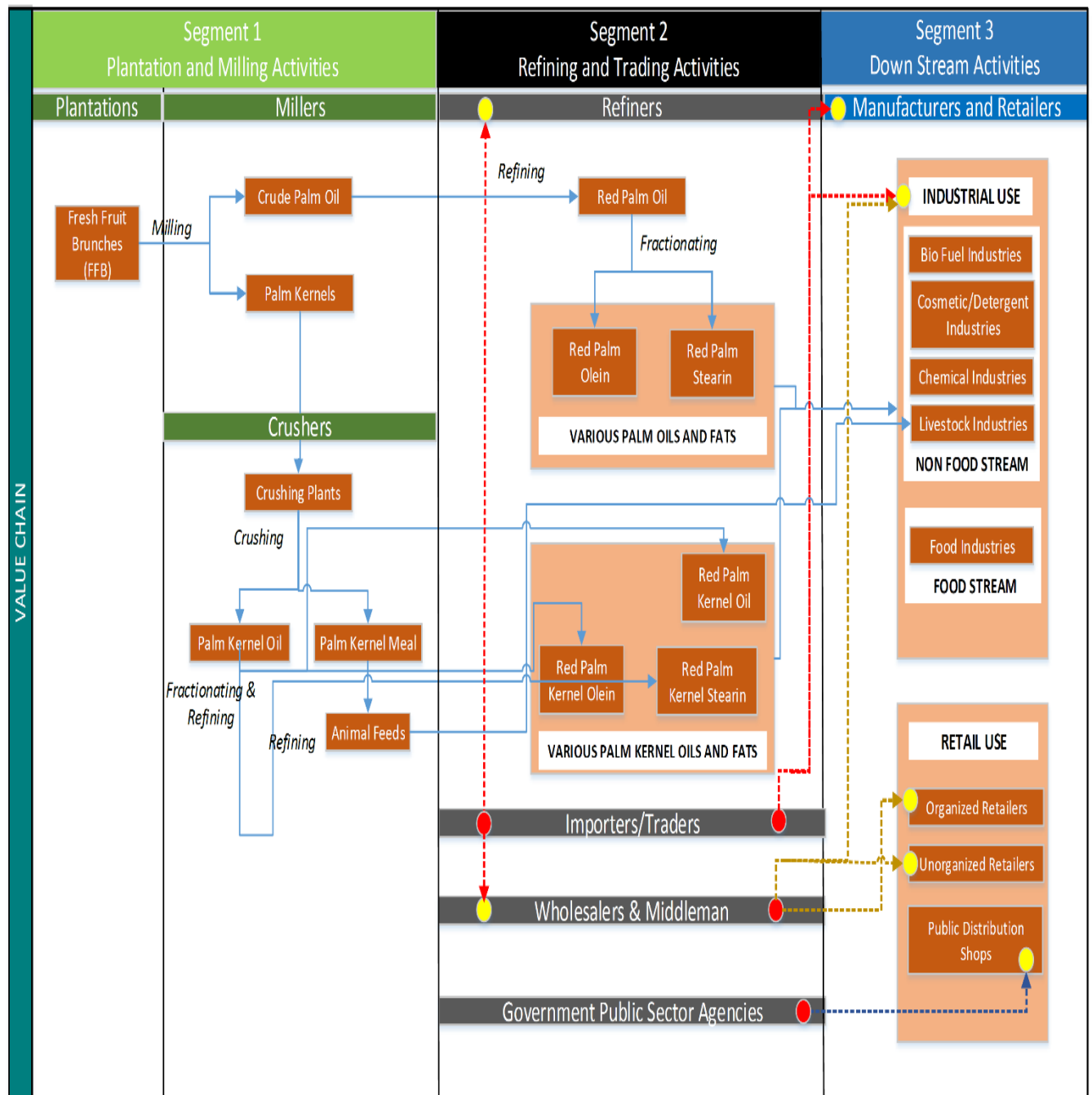


Figure 5: Palm Supply chain map

Key players across three segments of the palm oil supply chain are outlined to facilitate a better understanding of sustainability challenges in the palm oil sector in India.

### Segment 1: Plantation and Milling Activities

Growers are at the starting point of palm oil supply chain and, as the primary stakeholders, they have direct environmental and social impacts on the ground. Growers are closely linked to the mills – the next step along the supply chain. Key players for this segment include (but are not limited to):

Table 1: Segment 1- Key Players within Palm Value Chain in India

Key Players	Notes
<ul style="list-style-type: none"> <li>• Godrej Agrovet Ltd.</li> <li>• Ruchi Soya Industries</li> <li>• Foods Fats and Fertilizers Ltd.</li> <li>• Oil Palm India Ltd.</li> <li>• Gujarat Cooperative Society and many more...</li> </ul>	<ul style="list-style-type: none"> <li>• Total area under palm oil production in India is 182,146 ha<sup>9</sup>.</li> <li>• Ministry of Agriculture has identified a total of 1071,000 ha area across 14 states of India as suitable for palm oil plantation<sup>10</sup>.</li> </ul> <p>Additional information on the structure and performance of domestic production is mentioned in the later part of this report</p>

### Segment 2: Refining and Trading Activities

In the next step, the Crude Palm Oil (CPO) and Crude Palm Kernel Oil (CPKO) undergo a refining process in the refineries. Due to the huge gap in demand and domestic production of palm oil and its relatively cheaper price compared to other edible oils, a major proportion is imported from Indonesia and Malaysia through a network of traders and importers that in turn supply it to local refineries or manufacturers for industrial usage and also to local wholesalers and middlemen.

The middle of the supply chain then pushes the supply to retail and industrial customers for further consumption. Some government agencies are also involved as intermediaries, primarily to support the public distribution system.

The domestic business in India is impacted by the differential duty imposed by Indonesia and Malaysia on the export of CPO and RBD Palm Olein as a higher duty is being placed on the export of CPO and a lesser, or even negligible duty is being placed on the export of RBD Olein, the quantity of RBD Olein imports increased from 1.24 million tonnes in 2008-09 to an estimated 2.20 million tonnes in 2012-13 due to this

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<sup>9</sup>Source: Ministry of Agriculture, Government of India

<sup>10</sup>Source: Vision 2030, Directorate of Oil Palm Research, ICAR

The key players in this segment include (but not limited to):

Table 2: Segment 2- Key Players within Palm Value Chain

Key Players	Notes
<ul style="list-style-type: none"> <li>• Ruchi Soya Industries Ltd.</li> <li>• Kamani Oils</li> <li>• Acalmar Oils and Fats Ltd.</li> <li>• AdaniWilmar Ltd.</li> <li>• Amira Foods India Pvt. Ltd.</li> <li>• Anik Industries</li> <li>• Cargill India and many more...</li> </ul>	<ul style="list-style-type: none"> <li>• Total domestic palm oil production during the year 2011-12 was 0.11 MMT<sup>11</sup></li> <li>• Total palm oil import during the year 2011-12 and 2012-13 has been 7.7 MMT and 8.29 MMT<sup>12</sup> respectively.</li> </ul>

**Segment 3: Downstream Activities**

In the last segment, two types of downstream sub-segments emerge in the value chain – food based and non-food based usage (industrial or retail) driven by palm oil and its derivatives. A representative list of major players in the Indian market context is presented below, though it is not an exhaustive list of all the players:

Table 3: Segment 3- Key players within Palm Value chain

Category	Sub Categories	Key Manufactures &Retailers	Prominent Brands Using Palm Oil (Sample Brands Only)
Food based	Food and beverages		

<sup>11</sup>Source: Ministry of Agriculture, Government of India







<sup>12</sup>Source: Solvent Extractor’s Association of India

Category	Sub Categories	Key Manufactures & Retailers	Prominent Brands Using Palm Oil (Sample Brands Only)
			
			
			
			
Food based	Food and beverages	 <p>Share with Pride</p>	

Category	Sub Categories	Key Manufactures &Retailers	Prominent Brands Using Palm Oil (Sample Brands Only)
			
			
			
Non Food based	Cosmetics and pharmaceuticals		

Category	Sub Categories	Key Manufactures &Retailers	Prominent Brands Using Palm Oil (Sample Brands Only)
			 
	Home care – Dish wash, Fabric Wash, Hard surface cleaners		 
			
	Personal Care – Shampoo, Conditioners, Soft soaps		
			  
Non food based	Personal Care – Shampoo, Conditioners, Soft soaps	 <p>A Partner of Choice</p>	



Category	Sub Categories	Key Manufactures &Retailers	Prominent Brands Using Palm Oil (Sample Brands Only)
			
			
	Chemical Specialties		Fatty acids, Fatty Alcohols, Glycerin
	Bio Fuels		
<p>Note:</p> <ul style="list-style-type: none"> <li>• 90 percent of palm oil volume in India is used for edible/food-based products and 10 percent is used for non-food based usage.</li> <li>• Oil in India is sold primarily (89 percent) in loose form and a small percentage (11 percent) in the branded and packaged form.</li> </ul>			

It is evident from this list that Indian companies form the majority of players in the palm oil supply chain. The more well-known multinational companies are found in the third segment. They tend to use palm

oil, either domestically produced or imported, that has already gone through a refining process in India, and therefore they do not play an active role in deciding the origin of crude palm oil. Although the size of Indian companies involved in the sector ranges from small processors to large corporations engaged in organized retail, a general trend is that most of the Indian companies are more focused on short-term financial growth rather than long-term sustainability aspects. Nevertheless, in some instances the effect of pressure from multinational companies for sustainable sourcing is visible on the Indian companies. Some of the domestic players (e.g. Kamani Oil, Triveni Oil Industries, and others) have taken up RSPO certification upon request from their key buyers who want to move to sustainable sourcing.

## 2.3 SUSTAINABILITY CHALLENGES IN THE PALM OIL SUPPLY CHAIN

India's global image around sustainability issues needs substantive improvement. India ranks low on Yale's Environmental Performance Index, and enforcement of environmental laws is generally thought to be uneven. It is not difficult to notice that the more sophisticated sustainability efforts in India are largely found in the local operations of multinational companies (MNCs), and the suppliers to MNCs, under pressure to become more 'green'. It is a general trend that most Indian firms are focused on short-term financial growth rather than sustainability objectives. Although a significant number of India-based businesses do make sustainability efforts, these initiatives are designed by the companies' own experts and driven by each company's local needs and opportunities and this trend is no different in the palm oil sector. A close look at the key companies in India using palm oil and their respective roles in the sector presented in Table 4 below provides a good indication of this local dominance.

Table 4: List of major companies across the palm oil supply chain in India

Sl. No	Category	Name of company
1	Global Brand	Nestle India Limited
2	Global Brand	Proctor & Gamble India Limited
3	Global Brand	Hindustan Unilever
4	Global Brand	Pepsico Foods
5	Global Brand	United Biscuits
6	Global Brand	Cargill India Limited
7	Local Business, Traders & Processors	ITC India Limited
8	Local Business, Traders & Processors	Britannia Industries Limited
9	Local Business, Traders & Processors	Parle Industries Limited
10	Local Business, Traders & Processors	Kamani Oil Limited
11	Local Business, Traders & Processors	Godrej Industries Limited
12	Local Business, Traders & Processors	Acalmar oils & Fats
13	Local Business, Traders & Processors	Ruchi Soya Industries Limited
14	Local Business, Traders & Processors	AdaniWilmar
15	Local Business, Traders & Processors	VVF Industries
16	Local Business, Traders & Processors	Anik Industries

Sl. No	Category	Name of company
17	Local Business, Traders & Processors	Amira Foods India Limited
18	Local Business, Traders & Processors	Bunge India Private Limited
19	Local Business, Traders & Processors	Kanpur Edibles Limited
20	Local Business, Traders & Processors	Gemini Edibles and Fats India Private Limited
21	Local Business, Traders & Processors	GokulRefoils and Solvents Limited
22	Local Business, Traders & Processors	Gujarat Ambuja Exports Limited
23	Local Business, Traders & Processors	JVL Agro Industries Limited
24	Local Business, Traders & Processors	Kalueeshwari Refinery Private Limited
25	Local Business, Traders & Processors	Kanpur Edibles Pvt Ltd
26	Local Business, Traders & Processors	Liberty Oil Mills Ltd.
27	Local Business, Traders & Processors	Parisons Foods Pvt Ltd
28	Local Business, Traders & Processors	Rasoi Ltd
29	Local Business, Traders & Processors	Sanwaria Agro Oil Ltd
30	Local Business, Traders & Processors	Triveni Oil Industries
31	Local Business, Traders & Processors	Vimal Oil Mills
32	Local Business, Traders & Processors	Emami Biotech Ltd

The study assessed the awareness of sustainability issues among stakeholders in the Indian palm oil industry from two points of view- one regarding the domestic palm oil production and the other related to palm oil imported in India.

### 2.3.1 Domestic Palm Oil Production and the Sustainability Perspective

In India, palm oil plantations mostly began in early 1990s owing to the significant commercial value of palm oil and its high productivity compared to other edible oils. India produces a mere 70,000 tonnes of palm oil annually i.e., just 0.2 percent of total global palm oil production. Andhra Pradesh has been the leading palm oil producing state in India, contributing approximately 85 percent of the country's production, followed by Kerala (10 percent) and Karnataka (2 percent). Other palm oil producing states include Orissa, Tamil Nadu, Goa and Gujarat. Godrej Agrovet Limited is the largest palm oil plantation company in India, producing over 20,000 tonnes per year.

Domestic palm oil production in India is based on a command area model in which the state governments allocate specific plots of land, which are considered as wastelands to companies for growing palm trees<sup>13</sup>. These lands have little value in terms of biodiversity or environmental risk as the government undertakes proper due diligence before allocating territories to the companies. Growers are required to sell

The entire production of Fresh Fruit Bunches at a pre-determined price (linked to output price)

set by the Government. The companies in turn promote palm oil cultivation, and provide nursery stock to interested farmers under a contract-farming approach supported by the state government wherein the companies are mandated to purchase all of the farmers' stock at a price fixed by state governments. It might not be appropriate to say that the vertically integrated plantations for palm oil production in India are unsustainable. Many palm oil growers stated that their plantations are well managed in environmental and social terms. According to the Vice President of Godrej Agrovet Limited, "the industry considers that it has contributed greatly to rural and national developments, and it also has a relatively good record of developing and applying sustainable practices by facilitation of government schemes to help small holders to practice good agriculture practices at farm".

Sustainability concerns such as deforestation and loss of biodiversity and wildlife are not applicable in India as palm oil production is encouraged on wastelands. Although the notion that "if oil palm production is encouraged in wastelands or territories identified by government bodies it may not cause any sustainability issues", is rejected by a few stakeholders. RSPO considers this assertion flawed and points out that 'wasteland' is a vague term and it is quite possible that it may include forests and high conservation value areas. The government and local industry need to examine whether creation of new plantations causes any degradation of biodiversity or of the ecosystem and whether there are any negative environmental or social impacts on local communities that are dependent on the ecosystem for

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<sup>13</sup> <http://univisionin.blogspot.in/2012/05/central-government-assistant-schemes.html>

[http://www.godrej.com/godrej/GodrejIndustries/download/09-10\\_Q4\\_Pressrelease.pdf](http://www.godrej.com/godrej/GodrejIndustries/download/09-10_Q4_Pressrelease.pdf)

food, medicines and ecosystem services (such as regulation of the hydrological cycle and soil protection provided by forests), as palm oil production tends to reduce freshwater and soil quality (Fitzherbert et al, 2008). However, in the domestic context, like any other commodity, palm growing and its oil production and processing will have certain environmental and social challenges, to the locals and their surrounding environment. Some of these challenges are summarized in Table 5 below

Table 5: Major environmental and social concerns for palm oil production in India

Environmental concerns	Social concerns
<ul style="list-style-type: none"> <li>• The process of palm oil production tends to reduce freshwater and soil quality</li> <li>• Impacts the regulation of hydrological cycle and soil protection provided by forest</li> <li>• India is a major contributor to climate change based on greenhouse gas emissions. As per the Earth Policy Institute, India stands at number three after China and United States. Total CO2 emissions were 596 million tonnes in 2012.</li> </ul>	<ul style="list-style-type: none"> <li>• May adversely impact local communities that are dependent on ecosystem products</li> <li>• Child labour could be a problem. According to government statistics approximately 90 million children (between the ages of 6-14) are not in school, however, only 20 million of these children are engaged in some occupation, and plantation and farming is a probable occupation. Hence, we need to understand the dynamics of the huge gap.</li> <li>• Workers rights issues may be affected as a majority of the workers employed in the plantation industry are unskilled and many of them are not aware of the provisions of Minimum Wage Act, 1948, Equal Remuneration Act, 1976 and the various other labour acts enacted for their welfare. The high rate of illiteracy and low level of awareness make them more vulnerable to exploitation by the employer.</li> <li>• According to Food Navigator Asia, globally 30 percent of palm oil is produced by smallholders. If sustainability needs to be the norm then certainly small holders need to be taken along. Generally small holders have lower yields compared to estates. Thus, greater inclusion of smallholders and a raising of their yields would lead to an increase in the production of palm oil without the conversion of new lands<sup>14</sup>.</li> </ul>

Given the viewpoint of the local industry in India, should it be assumed that all domestically produced palm oil is sustainable? Currently there is no such procedure or process in place that suggests that all

<sup>14</sup><http://www.foodnavigator-asia.com/Policy/Inclusion-of-palm-oil-smallholders-is-a-tough-nut-to-crack>

domestic plantations follow sustainability principles in India. The problem is further confounded in situations where companies operate in a difficult and unpredictable legal environment such as India, where there is weak enforcement of laws and regulations. Although there are pockets of good agricultural practices, this is by no means uniform. That said, the picture is far better in India than in other major South-East Asian exporting countries that have been at the centre of controversies on sustainability issues. The domestic palm oil industry ought to adopt a credible mechanism that can demonstrate that the majority of companies follow sustainable (environmental & social) business models that can stand the test of independent scrutiny.

### 2.3.2 Imported Palm Oil and The Sustainability Perspective

Imports of palm oil in India are controlled with high import duties imposed by the government. The two main countries from which palm oil is imported are Malaysia and Indonesia. Figure 6 outlines the import trend of palm oil over the last five years. Clearly the import volume for Crude Palm Oil and RBD Palmolein is steadily increasing.

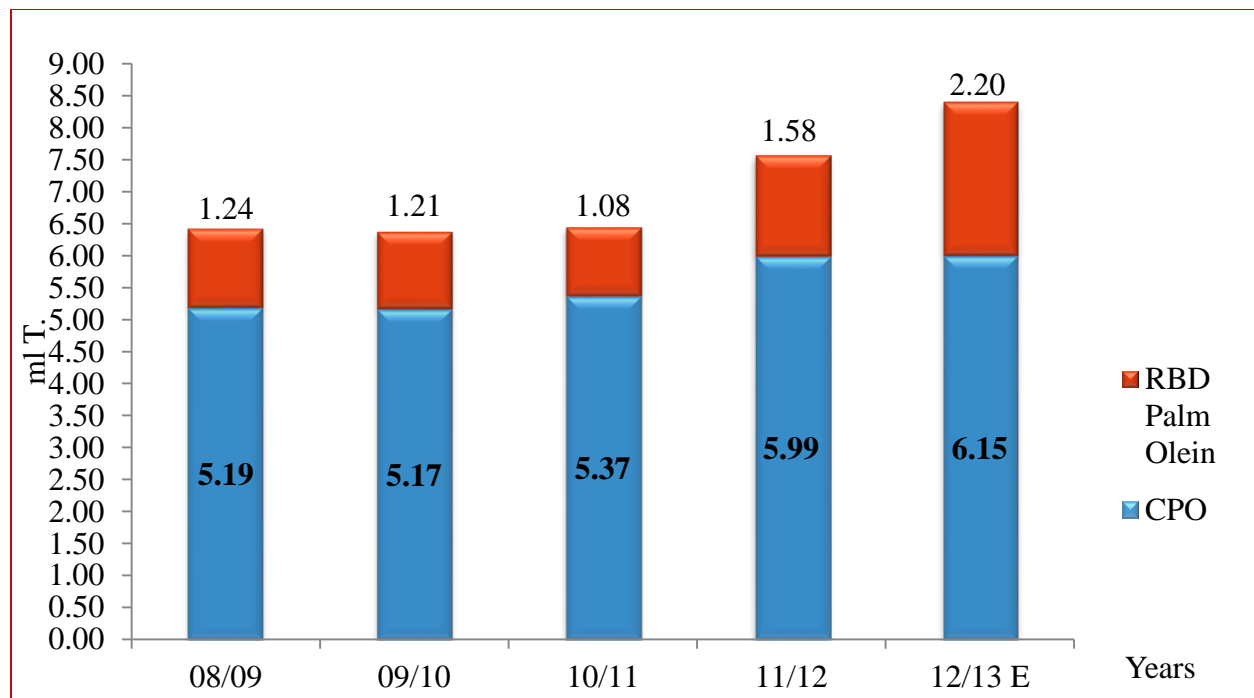


Figure 6: Palm Oil Import Trend

The structure of the Indian palm oil industry is fragmented in general, however, there is some consolidation by large domestic and multinational companies. Ninety percent of the total volume of palm oil in India is used for edible/food-based products and 10 percent goes towards non-food based usage. Out of this, 90 percent is sold in loose form and a small percentage (11 percent) in the branded and packaged form as outlined below.

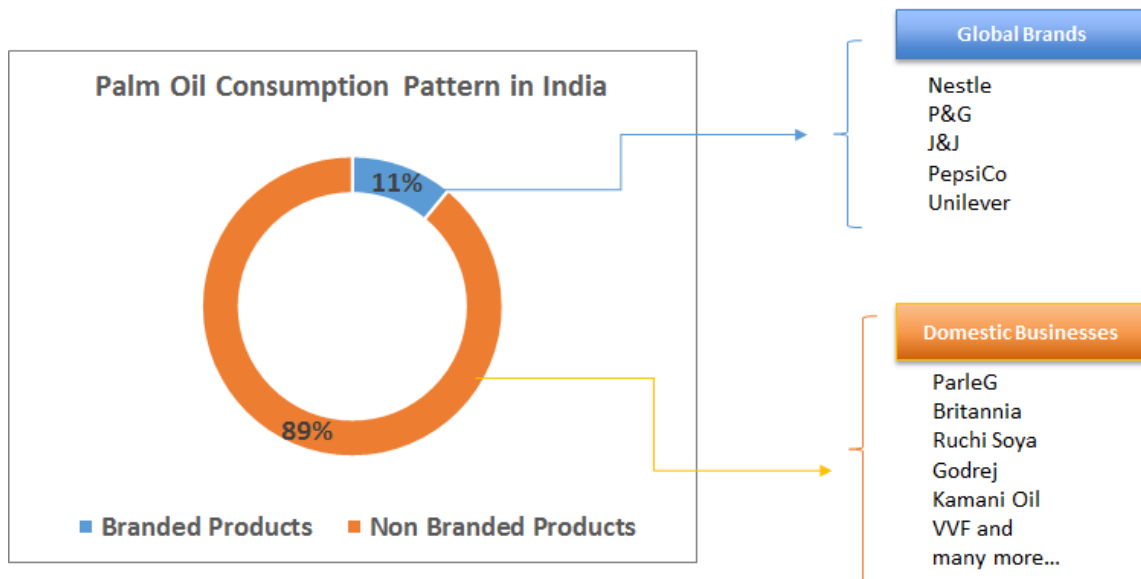


Figure 7: Palm Oil Consumption pattern – Branded vs. Non-branded

One key point that stands out is the fact that there is a clear difference between brands and businesses that operate locally. Brands have reputational risk due to sustainability concerns whereas businesses (traders, refiners, etc.) are not overly concerned about reputational risk.

As a result of the desk-based research and interaction with industry stakeholders, the top five challenges constraining the Indian palm oil industry from becoming more sustainable are summarized below:

1. Price sensitivity and market dynamics:

- The fluctuation in global demand and supply of edible oil markets, mirrored by demand and supply within the domestic market, aggravates price sensitivities in local trading market. This means that there is an easy substitution between different edible oils based on their price differentials.



- The increased demand for palm oil for local consumption creates a competitive market in which price sensitivity takes precedence over sustainability concerns.
- With no strong local demand for sustainable palm oil, there is little incentive for domestic producers to follow sustainable practices or become certified as doing so would place them at a severe commercial disadvantage in the present market scenario. Another important point to note here is that palm oil is sold as an unbranded product, and therefore no premium is available to be paid as there could be on 'branded' sustainable palm oil. This market needs to be developed.

2. Enabling environment:

- Economic instability due to frequent changes in export regulations, taxation and exchange rates is seen as a deterrent to the development of sustainable palm oil markets. Therefore, there needs to be a clear policy direction from government agencies, with tangible targets to create an enabling environment for this industry for bringing in requisite focus for this sector.

3. Traceability challenges within the supply chain:

- Complexity and a lack of transparency in the palm oil supply chain causes traceability challenges as most of the oil is sold by unbranded companies. This also contributes to a lack of ownership and an unwillingness to transition to sustainable products.
- Upstream suppliers need time to begin procuring sufficient CSPO to meet the needs of all of their customers.

4. Low capacity utilization of processors:

- Due to the preferential duty imposed by Indonesia and Malaysia on the export of CPO and RBD Olein, higher quantities of RBD Olein are imported, which has reduced the capacity utilisation of the Indian palm oil refining industry.
- In July/August 2013, the export duty on CPO was 10.50 percent and the export duty on RBD Olein was only 4 percent for exports from Indonesia. Likewise during the same period, the export duty on CPO was 4.50 percent and export duty on RBD Olein was zero for exports from Malaysia. This represents a duty advantage of 6.50 percent and 4.50 percent to exporters of RBD Olein from Indonesia and Malaysia, respectively. The Indian palm oil refining industry has a disadvantage of USD 50/T (even considering the Indian import duty on RBD Olein).<sup>15</sup>

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<sup>15</sup> Source: GGN Research, *Journey of Palm Oil in India & Way Forward*, presented at Globoil India at Mumbai, September 2013

5. Consumer awareness:

- The palm oil sector is dominated by south-south trade and the ethical business standards index in both producing and consuming countries is quite low, thereby leading to relative inaction to address sustainability concerns related to palm oil within local markets.
- There is a lack of awareness about sustainability issues in palm, both on the part of consumers and intermediaries within the supply chain. The long-term social, economic and environmental benefits, both for society and for companies themselves, are not clearly understood by these groups.
- Palm oil is mainly sold as an unbranded product and this makes it difficult for those domestic companies that would like to import sustainable palm oil to differentiate their products in the marketplace.

Almost all of the participants in this study felt that sustainability concerns such as deforestation and loss of biodiversity/wildlife are applicable to palm oil imported from South-East Asian countries. The CEO of one company stated that “the issue of sustainability in relation to imported palm oil has to be tackled at the point of origin itself and the exporting countries need to put more efforts and resources towards ensuring sustainability as in current scenario they are protecting their domestic industries and creating a situation where Indian refiners and processors are losing out in terms of price competitiveness in the marketplace”. Most of the processors stated that they were operating much below their installed capacity due to the current tax differential (5 percent) between crude and refined oil. Owing to the skewed differential in favor of refined oils, a majority of processors are using up to 60 percent of their current capacity or even less.

Whilst many companies stated that their business and economic viability takes precedence over sustainability concerns, and this might indeed be true for certain segments of value chain, it is important to note that companies with consumer facing brands cannot afford to take such an approach since they have to protect their brand reputation and value in the long term. Brands typically take a stronger approach towards critically examining the environmental and social risks and assessing impacts across the whole supply base (including production and non-production sourcing) because ignorance about their supply chain can make them vulnerable to criticism. Despite commitments to responsible sourcing and becoming members of RSPO, many companies have demonstrated poor verification and traceability. These companies may be exposed to higher risks than they have anticipated due to the usage of palm oil or its derivatives in their brands or goods. In the current scenario, on the brands associated with unsustainable palm oil production or sourcing might not be visible to consumers, however, this trend is likely to change with NGOs’ and civil society’s increased efforts to educate the public at large. In the long term, as the market transforms and moves towards the sustainability plateau, the window of responsible business practices may scale out and touch a wider range of products and sectors in India.

It also emerged from the study that there are fragmented segments within the larger value chains that have little or no awareness of sustainability issues or sustainability standards such as RSPO and RSB. There is significant potential for the dissemination of improved practices and the uptake of certification through capacity building if these standards systems can make in-roads within the Indian palm oil sector. A majority of the respondents felt that currently there is no demand for sustainably palm oil in India as evidenced by the purchasing behavior of importing and processing companies. In the opinion of the companies, if demand for sustainability existed on the part of customers, then they would procure sustainable palm oil and pass the cost onto the customer. However, for this to materialize the market needs to be created. Examining the data on CSPO in the Indian sector, published in the RSPO ACOP Digest from 2012-13, we see that the current CSPO usage and its derivatives stands at just 144 tonnes, compared to a total import volume in the range of 8.3 million tonnes. This reiterates the fact that domestic markets need to be enhanced to cater to local needs.

The key determining factors for companies in India to increase the uptake of CSPO from their current practice will depend on whether sustainable sourcing poses significant business risks in the future. The following factors may influence these decisions:

- Where the palm oil comes from (i.e. sustainable or non-sustainable sources);
- Whether the company has exposure to consumers or is under customer pressure;
- Whether the company has published policies on sustainable development; and
- Whether sustainability becomes an issue of greater prominence among the public, the media, consumers, regulators, or pressure groups.

In the Indian context, the assessment has identified the sustainability intent and vision of a representative list of domestic and multinational companies operating locally or having a market commitment in India, as well as their commitment to the cause. As per RSPO (India), there are 28 registered members from India – 20 ordinary members, 7 supply chain associates and 1 affiliate member - but their uptake of sustainable palm oil is incredibly low. Table 6 provides an overview of sustainability commitments of major companies in India.

Table 6: Sustainability Commitment by Companies with Footprints in Indian Market

Company	Future Sustainability Strategy (Next year and beyond...)
Nestle	Nestle has shown its commitment for responsible sourcing by declaring that the company shall achieve its commitment to purchase 100 percent of the palm oil from sustainable sources (including Green Palm certificates) by end of 2013. <sup>16</sup>
Hindustan Unilever Ltd. (HUL)	Unilever had a defined target to achieve 100 percent certified sustainable palm oil (CSPO) covered by Green Palm by end of 2012 and the company has also set

<sup>16</sup><http://www.nestle.com/csv/responsible-sourcing/deforestation>

Company	Future Sustainability Strategy (Next year and beyond...)
	a new target of purchasing all its palm oil from traceable sources by 2020. <sup>17</sup>
P&G	P&G has committed to sustainable sourcing of palm oil by 2015 as the target by when all sourcing will originate from responsible and sustainable sources. (Refer below *)
PepsiCo Food	Based on their assessment, PepsiCo believe that by 2020 they will have the ability to obtain 100 percent physical RSPO certified palm oil globally. At present, in markets where they can physically procure RSPO certified palm they have chosen to purchase mass balance CSPO. In markets where they have either found it difficult to procure CSPO, or when it has been costly they have used Green Palm certificates. As an action plan for this year PepsiCo has committed to work with expert groups to help raise awareness of the importance of sustainable palm oil, particularly in India. PepsiCo is also working with suppliers to promote responsible palm oil sourcing in Indian context. (Refer below*)
Bharti Walmart (JV with Bharti and Walmart group)	Bharti Walmart has announced that the company will use SPO for all their private brand products globally by the end of 2015. In India, Walmart is about to upscale its procurement from 1,000 liters to 5,000 liters and has committed to buy Green Palm certificates by 2013.
Cargill India	Cargill an international marketer of food, agricultural, financial and industrial products and services has committed to achieve 100 percent usage of sustainable palm oil across its business (including China & India) by 2020. <sup>18</sup>
SC Johnson and Son	At present, they are analyzing their supply chain to get the accurate quantities involved and have committed to shift to 100 percent sustainable sources by 2015. (Refer below*)
United Biscuits	United Biscuits is already 100 percent CSPO compliant. However, they have set a target to achieve exclusively segregated oil use. Currently they are at 75 percent segregation and 9 percent mass balance with the remainder as GreenPalm. They have an internal plan in place to move to 20 percent in Mass balance within next 6 months. (Refer below*)
Johnson & Johnson	J&J has a goal to meet all its palm oil purchase sustainably by 2015. They plan to adopt a phased out approach and achieve 6 per cent for mass balance/identity preservation and the balance of 94 percent Book and Claim by 2015. (Refer below*)
ITC	While ITC's annual sustainability report talks about the work that their group is involved with, there is no defined vision and time bound usage of 100 percent

<sup>17</sup><http://www.hul.co.in/sustainable-living/sustainablesourcing/>

<sup>18</sup><http://www.cargill.com/corporate-responsibility/pov/palm-oil/rspo/>

Company	Future Sustainability Strategy (Next year and beyond...)
	CSPO. This could be established considering the group has good presence in the consumer goods segment. <sup>19</sup>
Parle	No defined vision and targets could be established for this group.
Britannia	No defined vision and targets could be established for this group.
Godrej Industries Ltd.	<p>Godrej Industries Ltd. is an ordinary member of RSPO under the Palm Oil Processors and Traders category since September 10, 2006. As per their annual report of 2012-13, the total spend on palm oil is about 35 percent and it is sourced from sustainable sources. However, no clear details on overall target and long term goals is defined for their consumer goods division.<sup>20</sup></p> <p>As per their RSPO ACOP 2012/13 report the details have been provided from the point of view of miller/plantation which is typically carried through their company Goodrej Agrovet Ltd. However, no other details/targets on sustainable palm oil usage within its consumer companies could be established.</p>
Kamani Oil Industries Ltd.	Kamani Oil is an ordinary member of RSPO under the Palm Oil Processors and Traders category since May 9, 2009. It has given a commitment to achieve 100 percent RSPO certification of its supply chain by 2017 and by 2023 it plans to achieve handling/supply of RSPO certified palm oil products. (Refer below *)
Ruchi Soya India Ltd.	Ruchi is an ordinary member of RSPO under the Palm Oil Processors and Traders category since May 6, 2012. They do not have any defined vision or time bound target for moving to sustainable sourcing even though they have a major presence in the food and consumer goods segment. (Refer below*)
Acalmar oils & Fats Ltd.	<p>It is a joint venture between the Singapore based Acalpo Pte Ltd. and Wilmar International Ltd. However, no details on their commitment to sustainability and related targets could be established.</p> <p>Wilmar International is an ordinary RSPO member registered under the Palm Oil Processors and Traders category since August 16, 2005. As per their ACOP submission their sourcing of CSPO will be dependent on and be guided by their client's demand for CSPO.</p>
AdaniWilmar Ltd.	It is part of RSPO since June 25, 2010. However no details could be established about their sustainable palm oil target compliance except that most of their imports are from Wilmar International Ltd., Singapore.
Amira Foods India Pvt. Ltd.	No defined vision and sustainable palm usage targets could be established.

<sup>19</sup><http://www.itcportal.com/sustainability/sustainability-report-2013/sustainability-report-2013.pdf>

<sup>20</sup><http://www.godrej.com/godrej/Godrej-ConsumerProducts/pdf/Beyond-Business12.pdf>

Company	Future Sustainability Strategy (Next year and beyond...)
Anik Industries	No defined vision and sustainable palm usage targets could be established.
Bunge India Pvt. Ltd.	No defined vision and sustainable palm usage targets could be established.
VVF	VVF is an ordinary member of RSPO under the Palm Oil Processors and Traders category since September 4, 2008. However, no details could be established about their sustainable palm oil target compliance. As per ARCOP 2012/13, it has not submitted any reports on their usage.
Gemini Edibles and Fats India Pvt. Ltd.	It is a member of RSPO under the Palm Oil Processors and Traders category since April 26, 2012. However, no defined vision and sustainable palm usage targets could be established.
GokulRefoils and Solvents Ltd.	No defined vision and sustainable palm usage targets could be established.
Gujarat Ambuja Exports Ltd.	No defined vision and sustainable palm usage targets could be established.
JVL Agro Industries Ltd.	No defined vision and sustainable palm usage targets could be established.
Kalueeshwari Refinery Pvt. Ltd.	No defined vision and sustainable palm usage targets could be established.
Kanpur Edibles Pvt. Ltd.	No defined vision and sustainable palm usage targets could be established.
Liberty Oil Mills Ltd.	It is a member of RSPO under the Palm Oil Processors and Traders category since November 10, 2012. However, no defined vision and sustainable palm usage targets could be established.
Parisons Foods Pvt. Ltd.	It is a member of RSPO under the Palm Oil Processors and Traders category since September 14, 2012. However, no defined vision and sustainable palm usage targets could be established.
Rasoi Ltd.	No defined vision and sustainable palm usage targets could be established.
Sanwaria Agro Oil Ltd.	No defined vision and sustainable palm usage targets could be established.
Triveni Oil Industries	It is a Supply Chain Associate with RSPO since April 6, 2012. However, no defined vision and sustainable palm usage targets could be established.
Vimal Oil Mills	No defined vision could be established. However, it is a member of RSPO.
Emami Biotech Ltd.	It is a member of RSPO under the Palm Oil Processors and Traders category since March 15, 2012. No details could be established regarding their compliance to their sustainable palm oil targets.

Company	Future Sustainability Strategy (Next year and beyond...)
Galaxy Surfactants Ltd.	It is a member of RSPO under the Palm Oil Processors and Traders category since March 15, 2012. GSL has envisioned their supply chain certification by 2015. They will therefore work with their strategic partners to finalize a future strategy to handle/supply RSPO certified palm oil products. (Refer below *)
JOCIL Ltd.	They are ordinary members of RSPO under Consumer Goods Manufacturer since August 27, 2012. They plan to start using some RSPO certified palm oil from 2020 and target to meet 100 percent certified oil usage from 2025 onwards as per their commitment towards sustainability issues. (Refer below *)
Universal Biofuels Pvt. Ltd.	It is an ordinary RSPO member since December 10, 2012 and is a wholly owned subsidiary of American Outfit, EMETIC INC. Starting from January 1, 2013 they have resolved to seek palm oil supplies from Indonesian suppliers that are ISCC certified as they plan to supply sustainable palm oil derivatives to their customers in Europe and India.
Note:* <a href="http://www.rspo.org/file/acop2013/sectoral/Consumer%20Goods%20Manufacturers.pdf">http://www.rspo.org/file/acop2013/sectoral/Consumer percent20Goods percent20Manufacturers.pdf</a>	

The very fact that local businesses have started participating in sustainable initiatives and certification schemes that promote accountability, transparency and traceability within the palm oil sector indicates a paradigm shift in the local market within the context of CSPO. Certification schemes like RSPO have started playing a key role by encouraging members to declare their targets and report on their achievement on a continuous basis as part of their annual communication on progress (ACOP) submissions. While RSPO has managed to gain a number of prominent businesses as members, it has been unable to translate this into an increase in the demand and supply of sustainable palm oil.

Looking at the commitments of key players as mentioned above, we can conclude that:

- A large number of local businesses have not clearly articulated their sustainability vision nor have they set out any sustainability targets;
- Businesses that have a defined sustainability vision lack implementation, and in majority of the cases implementation plans are set out in the future; and
- Further clarity is needed from global brands on their sustainability commitments in India and also in scenarios where they have established joint ventures with local businesses.

Another important dimension to look at is the involvement of financial institutions supporting the key local players across the Indian palm oil supply chain. The local financial sector in India is comprised of banks and non-banking financial institutions (NBFIs). Banks dominate the local financial landscape, as

they account for substantial assets in the financial system. Some of the key financial players who are involved in the Indian palm oil supply chain include (but are not limited to):

Table 7: Banks Financing Palm Oil Supply Chain Players



Local commercial banks, both private and state-owned, have an opportunity to implement economic incentives or instruments for sustainability based on the International Finance Corporation’s (IFC) Sustainability Framework. This framework focuses on:

- Regulatory and governance reforms;
- Responsible private investments;
- Increased benefit sharing with smallholders and communities; and
- Development and widespread adoption of environmentally and socially sustainable standards and codes of practice.

The World Bank Group uses its policy framework (sustainability policy, performance standards, and safeguard policies) to influence the performance of major players in the palm oil supply chain, including financial institutions and banks. It is a given that the development of palm oil will continue to expand to meet an ever-increasing domestic as well as global demand for food, fuel and fiber. This will also lead to an expansion of the domestically produced palm oil sector. Therefore, it is important that buy in of the banking sector be secured, as their financial support for the growth of domestic palm oil production is required. The ability of the banking sector to direct and encourage the use of sustainable products can



ensure that social and environmental risks are adhered to. In this manner, the banks, along with their partners and stakeholders, play an important role in ensuring that new developments occur in a sustainable manner and that they contribute to poverty reduction.

By adopting the IFC's Sustainability Framework, local banks should make funding conditional on compliance with the comprehensive environmental and social criteria developed by RSB and RSPO.

## 2.4 CONCLUSION

In view of rising sustainability concerns across the globe, the RSPO was set up in 2004. The organization aims to address issues related to sustainability and help stakeholders from across the value chain develop best practices by integrating the RSPO principles into their management practice. RSPO seeks to advance the production, procurement, refining, distribution and usage of sustainable palm oil products. The RSPO certification system is based on key principles to minimize the impact of palm oil on the social front (workers' rights and conditions, treatment of smallholders, land ownership and conflicts, child labour, etc.) and environmental challenges (forest, peat-land biodiversity loss, conversion, climate change, etc.). Companies using palm oil seeking to start on the journey of sustainability can do so by taking the following steps:

- Support sustainable palm oil by joining the RSPO;
- Publicly acknowledge that irresponsible palm oil production has negative environmental and climatic impacts;
- Make a commitment to source 100 percent certified sustainable palm oil by 2020 and implement a time-bound action plan to deliver on this commitment; and
- Ensure traceability of the sustainable palm oil in their products by choosing from the supply chain options provided by the RSPO – GreenPalm, segregated and mass balance.

Currently, GreenPalm certificates are one of the most cost-effective and viable methods for businesses in India to take the first steps towards sustainability and support RSPO-certified sustainable palm production. In spite of this, the movement has not taken off properly. Some of the major reasons for this can be attributed to the nature of the business and the profile of the businesses operating in the palm oil sector. The assessment points out that Indian companies are more concerned with their operational profits than the public visibility of their sourcing actions. Furthermore, as India is yet to catch up with the global trend of associating brands with their environmental footprints, the industry does not put much emphasis on developing strong brand identities in the field of sustainability. The few initiatives that have been taken up by RSPO members who operate in India are by multinational companies aiming to develop a greener identity for their brands.

Continued unsustainable production and procurement (either domestic or imported) of palm oil can impact future supplies of an essential commodity and may lead to an increase in prices in a sensitive market like India. By sourcing only sustainable palm oil, Indian companies can take a step towards ensuring future supplies, and also take responsibility for their global impact on the socio-economic and environmental transformation of local regions and communities where they operate.

### Chapter 3

#### 3.0 PFAD AND THE POTENTIAL OF SUSTAINABLE BIODIESEL

##### 3.1 THE BIODIESEL PROGRAMME IN INDIA

India is an energy deficit nation. In 2011-2012, India's indigenous production of crude oil was only 38.09 million tonnes within its total consumption of 211.42 million tonnes<sup>21</sup>. As a result, India is increasingly becoming dependent on imported crude oil to meet its growing demand for energy. The import of crude oil has risen from 57.8 million tonnes in 1999-2000 to 171.73 million tonnes in 2011-2013<sup>22</sup>, accounting for about 81 percent of total oil consumption in the country. With the country entering the energy intensive phase of its development, demand for liquid fuels are expected to dramatically rise in the future. As the fourth largest global contributor to carbon emissions, The Government of India has recognized the contribution that biofuels can make towards meeting part of India's energy needs and reducing the carbon intensity of its energy demand, and initiated several programmes to promote biofuels production.

India commenced its biodiesel programme in 2003 with the formulation of a "National Mission on Biodiesel". This programme envisaged a 20 percent biodiesel blending target by 2011-2012 using *Jatropha Curcas* as the primary feedstock. This 20 percent blending target was to be implemented in two phases: Phase I would be a research and demonstration period from 2003-2007 to achieve the 5 percent blending target (B5). Phase II would be an implementation period from the 2007-2012 during which 20 percent of the blending target (B20) was to be achieved. In order to support this programme, the Ministry of Petroleum and Natural Gas (MOPNG) enacted a "National Biodiesel Purchase Policy", effective from November 1, 2006. The Ministry mandated 20 Oil Marketing Companies (OMCs) in 12 states of India as purchase centres and set a biodiesel buyback purchase price of INR 25 per litre, subject to periodic review.

However, India's biodiesel programme could not take off due to supply shortages and other concerns. To remedy this, the government adopted a "National Policy on Biofuels" in December 2009, formed by the Ministry of New & Renewable Energy (MNRE). Salient features of this policy include:

- A 20 percent blending target for biodiesel (B20) by year 2017. This target is to be phased in over time and until that schedule is finalized, there are no mandatory blending targets for biodiesel in the country
- The government will assess the potential of over 400 tree born non-edible oilseeds currently available in India for biodiesel production. This policy is not feedstock-specific.
- Using non-food feedstocks in order to avoid conflicts with food security. The policy promotes

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<sup>21</sup>Source: Basic Statistics on Indian Petroleum & Natural Gas 2011-12, Ministry of Petroleum & Natural Gas, Govt. of India

<sup>22</sup>Ibid.

plantations on government or community owned wasteland and on degraded or fallow land.

### 3.2 Biodiesel Production In India and the Policy Perspectives

Despite there being high investments in the sector, the biodiesel production programme in India has not yet been able to take off. Except for a few experimental projects by automobile manufacturers and state owned transport companies, there have been no commercial sales of *Jatropha* based biodiesel in the country. OMCs have not been able to blend a single litre of biodiesel even though the buy-back prices for biodiesel, which now stand at INR 39 per litre, have been revised many times. However, it is important to note that the Global Agriculture Information Network of the US Department of Agriculture states that India produces about 140 to 300 million litres of biodiesel<sup>23</sup>, which is sold to the unorganized sector.

Further, it is also important to note that the biodiesel industry in India is going through difficult times. “2,500 crores of investment made by biodiesel industry is lying idle”, reports Energetica<sup>24</sup>, India’s leading magazine in the field of energy. “Biodiesel units stare at uncertain future<sup>25</sup>”, is yet another report from The Times of India, India’s leading daily newspaper. The biodiesel industry has alleged that India has no commercial market for biodiesel. Data from the industry lobby states that the biodiesel industry in India has 1.2 million tonnes of unutilized capacity owing to the government ban on the commercial sale of biodiesel. On the contrary, India’s diesel imports may rise by up to 30 percent. “Government policies are not conducive to biodiesel production in India” stated the representative of Biodiesel Association of India (BDA). Major policy issues related to India’s biodiesel industry, as identified during the study, are summarized below:

- **Focus on non-food feedstock**

Although India’s biodiesel production policy has moved away from being *Jatropha* centric, there is no clarity on the use of non-edible palm derivatives such as PFAD and Palm stearin for biodiesel production.

- **Government control over production price and sale of biodiesel**

MOPNG’s directives to ban direct sales of biodiesel and the government’s authority on the purchase and sale of biodiesel at pre-defined prices are not compatible with the market forces. The national policy on biofuels under the stewardship of MNRE states that the storage, distribution and marketing of biodiesel could only be done through OMCs. Only OMCs can purchase and sell biodiesel in India and the industry is not allowed to sell biodiesel even to the industrial users.

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<sup>23</sup>USDA Foreign Agriculture Service, GAIN Report, India Biofuels Annual, 2012

<sup>24</sup>[www.energetica-india.net/percent2Fdownload.php/percent3Fseccion/percent3Darticles/percent26archivo/percent3DSfclsxDOwQ3fMrzOtp0iVtXeSB3iuW5C3WLjIPy5gpZsVO8E46mNo0r.pdf&ei=NdyUvLTA8XXrQeZ74GQDw&usg=AFQjCNElQhQPFQ2967KGecoaE4S4UG9A3w&bv=57155469,d.cGE](http://www.energetica-india.net/percent2Fdownload.php/percent3Fseccion/percent3Darticles/percent26archivo/percent3DSfclsxDOwQ3fMrzOtp0iVtXeSB3iuW5C3WLjIPy5gpZsVO8E46mNo0r.pdf&ei=NdyUvLTA8XXrQeZ74GQDw&usg=AFQjCNElQhQPFQ2967KGecoaE4S4UG9A3w&bv=57155469,d.cGE)

<sup>25</sup>[http://articles.timesofindia.indiatimes.com/2011-11-06/kolkata/30366184\\_1\\_biodiesel-production-biofuel-policy-sandeep-chaturvedi](http://articles.timesofindia.indiatimes.com/2011-11-06/kolkata/30366184_1_biodiesel-production-biofuel-policy-sandeep-chaturvedi)

While buyers in the open market are willing to pay about INR 78 per litre, the price OMCs are willing to pay for biodiesel is a meager INR 39 per litre, the minimum price set by the government, which does not cover biodiesel production costs. The costs from *Jatropha* comes out to be approximately INR 58 per litre. Consequently, none of the industries that have invested in the production of biodiesel are willing to sell biodiesel to OMCs for a loss, as a result of which OMCs have not been able to purchase a single litre of biodiesel.

- **Ban over exports of biodiesel**

The export of biodiesel from India is also a contentious issue. As per the National Policy on Biofuels, the National Biofuel Coordination Committee is responsible for making the call on the import and export of biofuels. While Free Fatty Acid Oil import is not permitted, biofuels can be exported from the country only after meeting the domestic requirements.

### 3.3 PALM FATTY ACID DISTILLATE (PFAD) AND OPPORTUNITES FOR SUSTAINABLE BIODIESEL PRODUCTION

Palm Fatty Acid Distillate (PFAD) is a by-product produced from the physical refining of palm oil. PFAD has been traditionally used in soap making, as an animal feed, and as raw material for the oleo chemical industry. In addition, due to its main constituent being 90 percent free fatty acid, PFAD also can be used as feedstock for the production of biodiesel. The process flow for biodiesel production from PFAD is illustrated in the figure below.

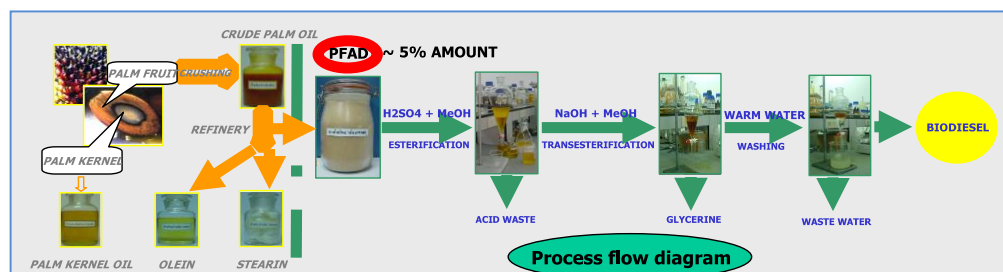


Figure 8: Process flow for biodiesel production from PFAD<sup>26</sup>

A study conducted by the Biodiesel Association of India indicated that a total of 149,500 MT of biodiesel was produced in India during 2012-13<sup>27</sup> and, most importantly, the feedstock used for this production was PFAD and Palm Stearin. According to the representative of BDA, “*Jatropha* and other non-edible oil feedstock are still at the trial stage and their commercial viability is yet to be established. On the contrary, palm derived feedstock are easily available and are being used for biodiesel production. Out of this production, about 81 percent is being exported, mainly to the European countries, and the rest is being used in India as a chemical (Methyl Ester) for making soaps and other applications”. This claim is

<sup>26</sup>Adapted from TISTR (Thailand Institute of Scientific and Technological Research) PFAD: AN ALTERNATIVE FEEDSTOCK FOR BIODIESEL PRODUCTION

<sup>27</sup>Source: Biodiesel Association of India.

somewhat substantiated by a report<sup>28</sup> from the German Union for the Promotion of Oil and Protein Plants, which states that the EU imported 25,000/37,000 and 50,000 litres of biodiesel from India during the year 2009/2010 and 2011 respectively. Universal Biofuels Private Limited, one of the leading biodiesel producers from the country interviewed during the study, also acknowledged the production of biodiesel from palm oil and its by-products, although they maintained that PFAD is not the right technological route for the production of biodiesel as per EN/ASTM (formerly known as the American Society for Testing and Materials) standards.

### 3.4 OPPORTUNITIES FOR BIODIESEL AND RSB UPTAKE

The Roundtable on Sustainable Biomaterials (RSB) is an international multi-stakeholder initiative that brings together farmers, companies, non-governmental organizations, experts, governments, and inter-governmental agencies concerned with ensuring the sustainability of biomass and biomaterial production and processing. The certification system is based on sustainability standards encompassing environmental, social and economic principles and criteria.

The opportunity to produce biodiesel from PFAD needs to be explored and exploited by Indian industry as India has the potential to produce approximately 435,000 MT of biodiesel from PFAD annually.

For companies in India committed to using RSPO certified palm oil in their supply chains, it brings forth opportunities for RSB certification of biodiesel produced from the PFAD of certified palm oil. As India also has its own network of palm oil producers, there is further opportunity for RSB to certify the domestic supply chain for biodiesel production from palm oil by-products. However, this potential cannot be harnessed unless the policy issues discussed above are addressed. At present, due to lack of clear policy guidelines, the biodiesel industry is struggling to make in-roads with the opportunities presented by biodiesel production in India. Some of the major issues facing the industry are:

- There is no clear-cut specification of PFAD as a non-food feedstock even though it is being largely used for the production of soaps and other oleo chemicals. BDA refers to the category 3823 (Industrial monocarboxylic fatty acids, acid oils from refining, industrial fatty alcohols) under chapter 38 of government notification for taxation under which RBD and other chemical extracts of palm are taxed at 12 percent whereas feedstock from palm is not taxed. PFAD being absent from the taxable category is claimed as qualified in the feedstock category.
- There is a clause in the national policy that biofuels can be exported from the country only after meeting the domestic requirements. This is a barrier to harnessing India's potential to export sustainable biodiesel. Nevertheless, biodiesel is being exported from India, made possible because biodiesel is not a commodity, but rather it is a chemical (Palm Methyl Ester) that has many uses. The industry is exporting Palm Methyl Ester not explicitly as biodiesel, and it is up to the final buyer to determine the product's purpose and usage based on its properties.

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<sup>28</sup>German Union for the Promotion of Oil and Protein Plants, International Biodiesel Markets Developments in Production and Trade

As the use of responsible materials and the customer demand for responsible products seem to be primarily limited to European countries, the present circumstances, which the open export of biodiesel from India, do not encourage RSB uptake.

Thus, based on the above discussion, there is a good potential to promote sustainable biodiesel derived from palm oil by-products. While the industry is open to promote sustainability certifications, there are several challenges relating to India's National Policy on Biofuels that, unless addressed, would constrain this opportunity. BDA of India is leading the movement on the promotion of the biodiesel industry and organizing the industry to advocate for policy change. CRB, ISEAL and RSB can engage with BDA and complement their efforts to promote sustainable biodiesel production in India.

## Chapter 4

## CONCLUSION

Palm oil has gained significant importance in the Indian and global edible oil markets. Demand for palm oil is expected to further rise owing to the variety of its uses, including its use in the production of biofuels. Rising global demand for palm oil is leading to the increase in acreage under palm cultivation in producing countries. With a view to extend total area under palm oil in India to 1 million hectares from the existing 0.16 million hectares, the Government of India has identified a total of 1.07 million hectares in 14 states of the country for palm oil cultivation. Although this kind of expansion may reduce India's over dependence on imported palm oil and contribute to the livelihoods of a large number of producers in the country, the challenge is to ensure that this growth is not achieved at the cost of biodiversity and the environment.

Similarly, there is also a need to be sensitive towards the origin of imported palm oil in the country to make sure that producers in the exporting countries are not producing palm oil in sensitive conservation areas. Therefore, it is essential that sustainable production practices, such as those being promoted by RSPO and RSB, are used. As discussed in this report, in the Indian context it is vital that the pull for sustainable palm oil comes from the consumption side. To accomplish this, both government policies and voluntary initiatives are required. In India, WWF has taken the lead in promoting the business case for sustainable palm oil among the palm oil industry players by closely liaising with RSPO and forming a working group. However, this initiative has not yet covered much ground.

Based on this brief research on the Indian palm oil supply chain and insights gained from various stakeholders in the sector, it can be concluded that in order to promote sustainability in the palm oil sector there is a need to focus on the following strategic areas:

- **Ensuring the sustainability of domestic production:** With an estimated use of 8.67 MMT in 2012-13, palm oil accounted for 50 percent of the total edible oil consumption in India. Currently, at around 0.3 MMT, Indian domestic production is insufficient to meet the palm oil demand in the country, leading to India's dependence on imports of palm oil from Indonesia and Malaysia. It is estimated that India has the potential to cultivate palm oil on 1.03 million hectares of land and produce 4-5 MMT of palm oil. This would be sufficient to cater to the consumption requirements of 330 million people at 15kg/capita/year. To this end, the Indian government has drawn up a strategy and is promoting large-scale palm cultivation through a special programme on Oil Palm Area Expansion (OPAE) under the Rashtriya Krishi Vikas Yojana (RKVY i.e.) National Agriculture Development Scheme. However, the domestic palm oil industry also needs to adopt a credible mechanism to demonstrate that this growth in domestic production of palm oil is not promoted by adversely impacting the environment, and that stakeholders follow sustainable (environmental & social) business models that can stand the test of independent scrutiny. This is where sustainability initiatives like RSPO can play important roles and promote sustainable domestic palm oil production.

- **Increasing demand for RSPO certified products:** Palm oil in India, termed as poor man's oil, is mainly consumed by lower middle and lower class of the society and is therefore highly price sensitive. This segment of the population purchases based on value, meaning that price takes precedence over sustainability concerns. Since there is lack of local demand for sustainable palm oil, there is little incentive for supply chain actors to engage in the sourcing of CSPO as it would place them at a severe commercial disadvantage in the current market scenario. This calls for implementing innovative solutions such as increasing consumer awareness, marketing palm oil as a sustainable brand among the middle and higher-class consumers, and promoting higher quality palm oil (e.g., super olien), etc. Setting time bound targets for RSPO members and introducing incentives for the promotion and use of sustainable palm oil could also be tools to promote increased demand for CSPO.
- **Integrating sustainable biofuels into the palm oil chain:** The total consumption of palm oil in India during 2012-2013, which was 8.67 MMT, presents the potential to produce about 435,000 MT of biodiesel from the palm oil by-product PFAD. As there is increasing demand for sustainable biofuels in European countries, PFAD derived biofuel production by way of a sustainably certified palm oil supply chain presents good opportunities for Indian companies. Companies in India using RSPO certified palm oil in their supply chain have the potential to supply PFAD extracted from certified palm oil to biodiesel producers, who can further benefit by accessing RSB certification of this biodiesel.
- **Increasing the efficiency of certification in India:** High certification costs that members have to pay to certifying or validating entities came out as another major barrier to the uptake of these sustainability certifications. The study indicated that there is an opportunity to increase the uptake of sustainability certifications in the palm oil sector provided that certification costs are made more affordable to the industry actors. Possibilities for reducing costs include simplifying and enhancing operational efficiency through building and leveraging local auditing capability and resources.

Following the above mentioned strategies there is ample scope to promote sustainability in the palm oil sector in India. It is also important to highlight that constructive engagement of various stakeholders, such as RSPO, RSB, ISEAL and CRB, with the palm oil industry stakeholders in India can be very helpful in advancing the journey of the palm oil industry in India towards sustainability. Specific recommendations for each of these agencies in this collaborative effort are summarized below:

#### **RSPO**

- Though current RSPO principles and criteria have been developed with the objective of promoting the growth and use of sustainable palm oil products through credible global standards, the lack of engagement with Indian stakeholders has meant that there is not a strong business case in the Indian context. Therefore, it would be appropriate to mention that RSPO should actively engage with the retailers and brand owners in India to ensure their buy in on the concept of sustainability and make RSPO a more market-facing label.



- Considering the realities of developing markets, which are price sensitive and where profit margins are low, RSPO should design new models of engagement such that businesses can benefit by adopting such schemes. This should evolve away from the existing model, in which it is difficult for the businesses to recover the cost of certification. Therefore, RSPO should plan to have a stronger regional presence in India in order to lower the cost of certification.
- RSPO should demonstrate the positive impact its members experience by integrating the RSPO sustainability principles and criteria into their businesses. This would not only increase the visibility of RSPO certification, but would also encourage businesses to adopt sustainability practices in their operations.
- In the Indian context it is vital to overcome the consumer perception that 'sustainable' automatically implies 'more expensive'. Therefore, RSPO should communicate a clear message on sustainable palm oil to consumers. Additionally, if the sustainability message carries health or quality attributes with the products, it is easier to sell in the Indian market.
- Consumer-facing companies, which have their own brands, are most vulnerable to scrutiny of their supply chains. Since these companies also cater to the educated and economically well off sections in India, RSPO should target them as drivers for driving a mind-set change among Indian consumers and encourage them to increase their CSPO uptake.
- There is high probability that in the near future multinational companies compromising their sustainability commitments or contravening their published standards will face customer and consumer-related pressures to become more responsible. This presents a good opportunity for RSPO to target these multinational companies and encourage them to be a part of the initiative to protect and promote their brands.
- RSPO should encourage and incentivize voluntary commitments to move to 100 percent CSPO with clear timelines.
- RSPO should encourage companies joining the organization as a member to make at least a minimum commitment to sustainable palm oil purchase.

## **ISEAL AND CRB**

- ISEAL and CRB should develop a lobby platform through which palm oil stakeholders in India can put pressure on the government to start levying a green cess on the import of non-sustainable crude/refined palm oil. Resources mobilized through this green cess can be further channeled to promote green movement within oil palm supply chain in the country.
- In order to prepare for this, CRB may run a signature campaign and motivate palm oil stakeholders to pledge their adoption of sustainability practices in their operations. This

campaign may aim to collect signatures from industry leaders, policy makers and other stakeholders declaring their commitments to promoting sustainable palm oil.

- Financial institutions may also play a vital role in promoting sustainable practices at the industry level. CRB and ISEAL can play an advisory role in guiding commercial banks, both private and state-owned, to cooperate with the Government of India through the Ministry of Environment and Ministry of Finance by implementing economic incentives or instruments based on IFC's Sustainability Framework.
- CRB and ISEAL should engage in opening up lines of communication between value chain actors. They should aim at educating large retailers and other big departmental stores in India about issues around sustainable palm oil and encouraging retailers to have separate green shelves for the companies adopting sustainable practices, based on RSPO principles, so as to differentiate and provide competitive advantages in the market.
- CRB should educate and encourage companies that are at risk of contravening their own published food quality, supply chain or sustainable development policies to join RSPO, RSB and/or other sustainability schemes and provide required guidance.
- CRB should create a policy and programme framework at the industry level to support companies looking to manage the environmental and social impacts of their operations and take advantage of opportunities to improve performance by helping them learn from the experiences of others and adopting best practices.
- CRB should educate the strategic team of companies by providing case studies of commodity markets and illustrating the impacts on their future operations. It is unfortunate that palm oil cultivation is often associated with negative social and environmental impacts, yet companies using palm oil seem to have little knowledge or understanding of the risks associated with palm oil in their supply chain.
- ISEAL should share its competency in the development of monitoring and evaluation (M&E) systems with RSPO and encourage RSPO to adapt its sustainability standards to the Indian context so as to improve impacts over time.
- CRB and ISEAL should develop a platform for dialogue between government bodies and biofuels industry associations in India so as to facilitate and develop programmes to support biofuels companies operating in India to keep sustainability at the core of their operations.

## **RSB**

- RSB should promote a platform for dialogue between the biofuels industry associations and other stakeholders, including the government, and encourage collaborative programmes such that biofuels producers in India adopt sustainability at the core of their operations.

- RSB is in a unique position to help fill the gap caused by slow biofuels adoption in India by providing local producers access to markets through its scheme.
- RSB should engage with leading biofuels companies to initiate a business case, on a pilot basis, factoring in a cost–benefit analysis of becoming RSB certified.

## ANNEXURES

### ANNEXURE 1 – REFERENCES

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40. <http://news.mongabay.com/2012/1102-vis-rspo-palm-oil-levy.html#x2dc7upL4pfBo5Qj.99>
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ANNEXURE 2 – SURVEY AND INTERVIEW QUESTIONNAIRE

2.1 Questionnaire for Palm Oil Processor/ Refiner

What is your annual purchase of crude palm oil? What percent is from India and what percent is imported
What is your use of palm oil? If you sell palm oil who (or which industries) are your main buyers?
What, in your opinion, are major sustainability concerns for the palm oil industry?
Are you aware of an initiative named Roundtable on Sustainable Palm Oil (RSPO)? Are you a member?
Do you buy RSPO certified crude palm oil? Why/ why not?
If you buy RSPO certified palm oil, what percent of your total crude palm oil purchase is RSPO certified?
What, in your opinion, are major advantages/ disadvantages of buying certified palm oil?
In your opinion, what value proposition RSPO certification offers to incentivize Indian companies to source and promote certified palm oil?
Do you find any barriers (e.g., related to taxation/ government policies) limiting demand/ growth of certified palm oil by your company?
What can be done to overcome those barriers?

What measures can be taken by agencies like RSPO/ CRB to promote use of certified palm oil in India?
Do you extract Palm Fatty Acid Distillate (PFAD)? What do you do with that?
Do you produce Palm Methyl Ester (biodiesel) from PFAD? If yes, what is your total annual production volume?
What do you do with your Palm Methyl Ester? Do you export it? Main destinations and volume?
Would you be interested in selling it as a sustainable certified product to Europe? What might be your concerns?
Please add any additional comments that might be useful for the study.

## 2.2 Questionnaire for Biodiesel Producer

Do you produce biodiesel? If yes, what is your feedstock and total annual production volume?
Reasons for producing/ not producing biodiesel from Palm Fatty Acid Distillate (PFAD)?
What do you do with your biodiesel? Do you export it? What are your main destinations?
If you export it, do you face any problem in exporting biodiesel while OMCs in the country are



not able to source biodiesel to meet 5 percent blending target?
Do you find any barriers (e.g., related to taxation/ government policies) limiting production/ export of biodiesel from the country?
What can be done to overcome those barriers?
Are you aware of any initiative to promote sustainability in biodiesel production?
If a sustainability certification scheme helps biodiesel producers get better prices on biodiesel exports to the European markets, would your organisation be interested in getting certified?
Please add any additional comments that might be useful for the study.

### 2.3 Questionnaire for Industry/ Government Representatives

What, in your opinion, are the major sustainability concerns for the palm oil industry in India?
Are you aware of an initiative named Roundtable on Sustainable Palm Oil (RSPO)? Are you a member?
What, in your opinion, are major advantages/ disadvantages of buying certified palm oil?
In your opinion, what value proposition RSPO certification offers to incentivize Indian companies to source and promote certified palm oil?
Do you find any barriers (e.g., related to taxation/ government policies) limiting demand/ growth

of certified palm oil in India?
What can be done to overcome those barriers?
Please add any additional comments that might be useful for the study.

2.4 Questionnaire for RSPO

How many members are currently registered in India with RSPO? Please provide a list of members and the type of certification they hold currently.
How many RSPO members in India are importing RSPO certified Crude Palm Oil? Please provide a member wise list indicating volumes and the category of certification (fully traceable/ mass balance/ green palm certificate).
The present purchase of certified palm oil is approximately what percent of Indian member's total purchase?
What is the demand pattern for certified palm oil in India? Is it Not picking up/ Picking up slowly/ Increasing/ Decreasing
Does RSPO promote certification among Indian palm oil growers also? If not, why?
In India, palm oil plantations are mainly being promoted on wastelands. What sustainability concerns can RSPO certification address in the context of palm oil production in India?
What value proposition does RSPO certification offer to incentivize Indian companies to source

and promote certified palm oil?
What, in your opinion, is the general perception of Indian companies towards buying certified palm oil?
What are your major concerns related to demand development for RSPO certified palm oil in India?
Do you find any barriers (e.g., related to taxation/ government policies) limiting demand/ growth of certified palm oil in India?
What can be done to overcome those barriers?
What are RSPO's long-term plans for Indian market that can lead to greater adoption of certified palm oil?
What kind of steps RSPO has taken to educate/create awareness among the consumers, retailers, manufacturers and policy makers in India on certified palm oil?
What measures can be taken by development agencies like CRB/ ISEAL to promote certified palm oil in India?
Please add any additional comments that might be useful for the study

### ANNEXURE 3 – LIST OF AGENCIES CONSULTED

Given below is the list of various organizations consulted during this study.

Sl. No	Name of representative	Designation	Name of organization	Place
1.	Anil Aggarwal	Partner	Triveni Oil Industries	Kolkata, West Bengal
2.	Ashok Agrawal	Director	Ambo Swastika Private Limited	Kolkata, West Bengal
3.	R R Govindan	Executive Vice President	Godrej Agrovet Limited	West Godavari, Andhra Pradesh
4.	Sudhakar Desai	Chief Executive Officer	Emami BioTech Limited	Kolkata, West Bengal
5.	Tapeshwar Das Gupta	Partner	Kanpur Edible Oils Private Limited	Kanpur, Uttar Pradesh
6.	Yogesh Shah	Asst. Vice President	Ruchi Soya Industries Limited	Indore, Madhya Pradesh
7.	Amitabh Sinha	Chief Executive Officer	Biodiesel Technologies India	Kolkata, West Bengal
8.	Arun Sengar	Sr. General Manager	Indian Oil Corporation	New Delhi
9.	Sandeep Chaturvedi	President	Biodiesel Association of India	Mumbai, Maharashtra
10.	T V Rambabu	Senior Vice President	Universal Biofuels Private Limited	Hyderabad, Andhra Pradesh
11.	Aditya Mishra	Senior Programme Officer	World Wide Fund for Nature, India	New Delhi
12.	Dr. K Suresh	Scientist In-charge	Directorate of Oil Palm Research	West Godavari, Andhra Pradesh
13.	Salahuddin Yaacob	Technical Director	Roundtable on Sustainable Palm Oil	Malaysia
14.	Sebastien Haye	Standards Director	Roundtable on Sustainable Biomaterials	Geneva, Switzerland

Note:

- A. SI 1-6 is the list of representatives from palm oil industry, SI 7-10 from biodiesel industry and 11-14 are key informants for the study.
- B. Organizations listed at SI 3-6 are RSPO members.