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PALM LINES

Envisioning a sustainable future for the Indian palm oil industry

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LIST OF ABBREVIATIONS ACOP ASEAN

ACOP Annual Communication of Progress
ASEAN Association of Southeast Asian Nations

B&C Book and Claim

BEI Banking Environment Initiative

CoC Chain of Custody

CGF Consumer Goods Forum

CPO Crude Palm Oil

CRB Center for Responsible Business

CSPO Certified Sustainable Palm Oil
CSPKO Certified Sustainable Palm Kernel Oil

CSPKE Certified Sustainable Palm Kernel Expeller

DASPO Dutch Alliance on Sustainable Palm Oil

EU European Union

ESG Environmental Social Governance

FDI Foreign Direct Investment

FFB Fresh Fruit Bunches

FONAP Forum Nachhaltiges Palmöl
FMCG Fast Moving Consumer Goods

GHG Greenhouse Gas

HoReCa Hotels/ Restaurants/ Café

ICAR Indian Council of Agricultural Research

ISPO Indonesian Sustainable Palm Oil

MB Mass Balance

MMT Million Metric Tonnes (weight)

MHA Million Hectare

MSPO Malaysian Sustainable Palm Oil

 ${\bf NMOOP} \qquad {\bf National\ Mission\ on\ Oil seeds\ and\ Oil\ Palm}$

OPAE Special Programme on Oil Palm Area Expansion

OPDP Oil Palm Development Programme

PDS Public Distribution System
PFAD Palm Fatty Acid Distillate
POIG Palm Oil Innovation Group

RBD Refined Bleached and Deodorized

RSPO Roundtable on Sustainable Palm Oil

SCC Soft Commodities Compact

SEA The Solvents Extractors' Association of India

SPOM Sustainable Palm Oil Manifesto

TFA Tropical Forest Alliance

ZSL Zoological Society of London



Street vendor, New Delhi

FOREWORD



India's new era of economic growth presents the country with unique environmental challenges. Never before has population growth, food security, demand for resources and environmental stresses like climate change and water shortages combined in such a manner. Indeed, the dimensions of these challenges are broader now than ever – with implications beyond the country's borders at regional and global scales.

This is most visible in the edible oil sector in India – an industry that relies heavily on the import of crude and refined oils to feed a growing population and provide inputs for consumer products. Palm oil constitutes the bulk of the edible oils used in India and is critical for food security, particularly for the low income segment.

However, the production of palm oil has severe environmental and social impacts, especially in Malaysia, Indonesia, and Africa which produce over 80% of global palm oil volumes and where production is leading to deforestation of tropical forests and perpetuating a pattern of climate-intensive agriculture that threatens the industry's own long term future.

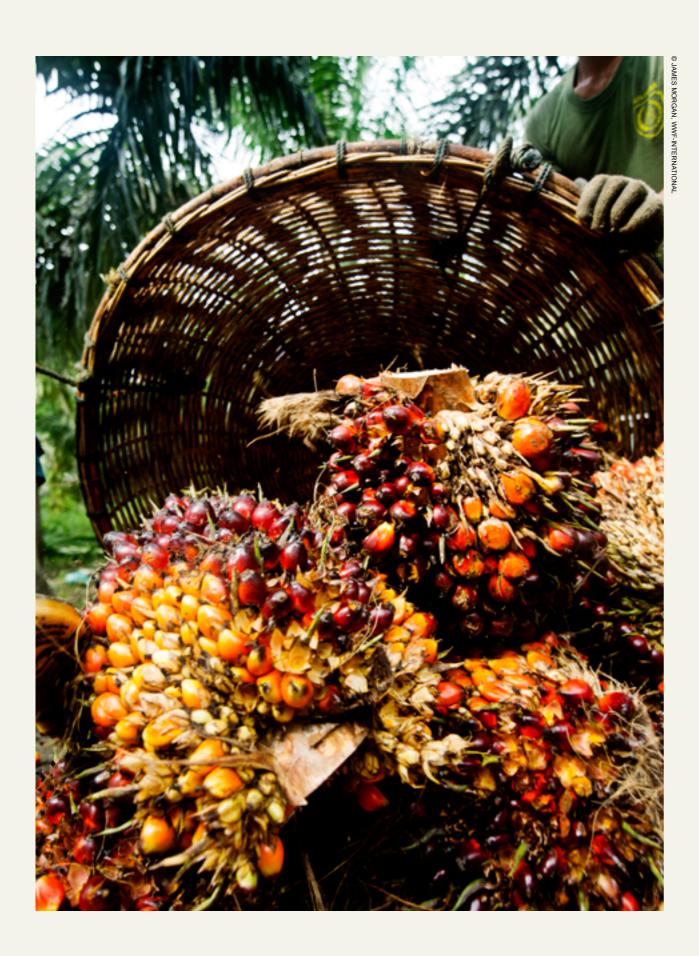
This report sets out a vision for India, as the world's largest palm oil market, to use its demand as a lever to shift production to be more sustainable. It recognises that this will require collective action from many stakeholders including the government, multinational and local companies, civil society and consumers themselves. The recommendations are made with sensitivity to the unique characteristics of the Indian market and in particular, the need to protect low-income consumers from price rises.

The report pinpoints the need for action by a select group of global and Indian companies who constitute the majority of the palm oil market. Companies which to date have made limited efforts to address the supply chain impacts of their business and / or have not translated their global commitments to actions in India, and yet for whom unsustainable agriculture practices, deforestation and climate change pose the greatest long term risk to continued financial success.

This report also serves as a practical guide for Indian palm oil companies to advance their journey towards purchase of sustainable palm oil through a step-wise approach. It also calls for local oil palm cultivation to adopt sustainable practices, and in particular, avoid conversion of primary forest.

This is a unique point in time to collectively work towards sustainable production and consumption of commodities before it is too late to save our forests and combat climate change.

Kavita Prakash-Mani Practice Leader, Food & Markets WWF International



EXECUTIVE SUMMARY

India's consumption of palm oil is the highest of any nation in the world. Palm oil lies at the heart of India's vegetable oil market and plays a key role in providing affordable food to a rapidly growing population in a country with limited productive land.

The sustainability challenges facing the palm oil sector are well known and are under increasing scrutiny. Oil palm plantations are a major driver of land conversion, forest loss and habitat destruction in producer countries. Efforts to find solutions to these challenges through market-based mechanisms such as certification have had greatest market penetration in western economies, but limited success in emerging markets.

India has the potential to play a significant role in driving sustainable practices in the palm oil sector but sizable barriers inhibit progress. The proposals outlined in this report are a synthesis of views from a range of stakeholders from across the palm oil sector and are recommended with sensitivity to the challenges and uniqueness of the local market.

The report summarises the key role that India can play in driving improved sustainability practices in the sector, and calls for a collective commitment to urgently address sustainability challenges in the palm oil market across multiple fronts, including:

- **Support by Government:** Policy instruments to promote the import of certified sustainable palm oil over regular palm oil.
- **Supply chain innovation:** Progressive supply chain screening policies for buyers which assess and screen upstream suppliers based on sustainability credentials.
- Boosting consumer demand: Raising consumer awareness through collaboration with the FMCG (Fast Moving Consumer Goods) sector.
- **Sustainable domestic production:** Ensuring adequate protection of Indian forests and farmers when considering oil palm expansion.
- Sustainable finance: Adoption of ESG (Environmental Social Governance) risk
 management frameworks by Indian banks to reduce exposure to unsustainable
 practices in the palm oil sector.
- **Collective action:** Increased collaboration between stakeholders to promote the increased uptake of sustainable palm oil.

The report provides clear guidance on how these initiatives may be taken forward and concludes that Indian companies, particularly those procuring large volumes of edible oil, lie at the heart of addressing the pressing sustainability needs of the industry.



The primary focus of this report is to capture and highlight the particular dynamics of the Indian palm oil market and to give impetus to growing efforts on sustainable sourcing by Indian companies.

In order to place this discussion in context, a summary of the global palm oil sector and its economic and social significance is provided in this chapter.

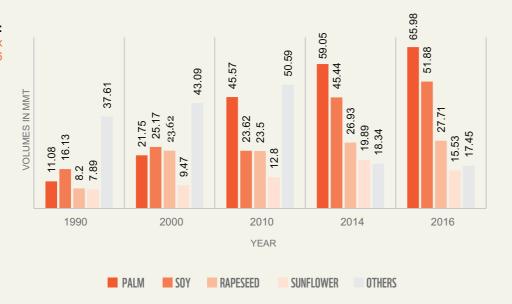
DYNAMICS OF GLOBAL PRODUCTION AND CONSUMPTION OF PALM OIL

Global Production

The global market for edible oils has grown rapidly in the last 25 years, with output increasing from 80.1 MMT in 1990 to almost 185 MMT in 2016-17¹. Palm, rapeseed, soybean and sunflower oils constitute the highest volumes. Consumer preferences are driven by geographic, economic and cultural factors. The share of palm oil in the global mix has grown from 13% in 1990² to 33% in 2016³, illustrating the growing preference for this cheap and versatile product.

Oil palm's productivity advantages over other vegetable crops like soy, sunflower and mustard (4-10 times the output per unit of land) also means that its cultivation is critical to global food security and nutrition. Low production costs and longevity of plantations implies palm oil will continue to increase its share in terms of the global output.

Figure 1: Global edible oil mix - 1990 to 2016



Indonesia, China and Malaysia are the top 3 producers of edible oil in the world. Indonesia and Malaysia dominate global palm oil production with 55% and 31% share of the total respectively – a total of 63.8 MMT in 2016-17.4

Table 1: Global palm oil producers

Production volume (MMT)	Percentage of total
35.00	54.8
19.50	30.5
2.30	3.6
1.14	1.8
0.97	1.5
4.95	7.7
63.87	100
	19.50 2.30 1.14 0.97 4.95



The palm oil industry is critical to the economic and overall development of Indonesia and Malaysia and other producer nations. With 3.7 million people directly employed and 25 million indirectly dependent on it in Indonesia, palm oil is the most important agricultural crop in the country from an economic perspective⁵. The developmental significance of the industry is underlined by the fact that almost 40% of plantations belong to smallholders⁶.

For Malaysia, palm oil is a significant export commodity with the total contribution from the sector being 16.1 billion USD or 5 % of the total GDP⁷. The contribution of the palm oil industry to human development and poverty alleviation in newer producer countries in frontiers such as Africa is also growing⁸.

Global Consumption

Palm oil is the highest consumed vegetable oil in the world with almost 41% of the share of total global consumption, followed by soy (31.4%) and mustard (16.7%). Growing demand for palm oil and derivatives from major markets like India, China, EU (European Union) and Indonesia has contributed to palm oil becoming the most popular edible oil at a global level.

Table 2: Global edible oil consumption by oil type

Туре	Global consumption (MMT)	Percentage of total
Palm, Palm Kernel	69.76	40.7
Soy	53.87	31.4
Sunflower	15.73	9.2
Mustard	28.67	16.7
Cottonseed	4.38	2.6
Coconut	3.28	1.9
Olive	2.86	1.7
Total	171.34	100

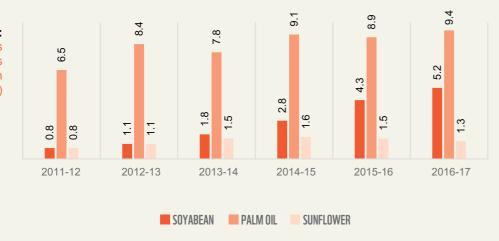
India dominates overall global consumption of palm oil at 9.75 MMT in 2017 while Indonesia is the second highest consumer with 9.47 MMT and the EU comes in next with 6.65 MMT.

Table 3: Region wise palm oil consumption in 2017

Country	Volumes (MMT)	Percentage of total
India	9.75	15.3%
Indonesia	9.47	14.8%
China	5.00	7.8%
Malaysia	3.17	5.0%
EU	6.65	10.5%

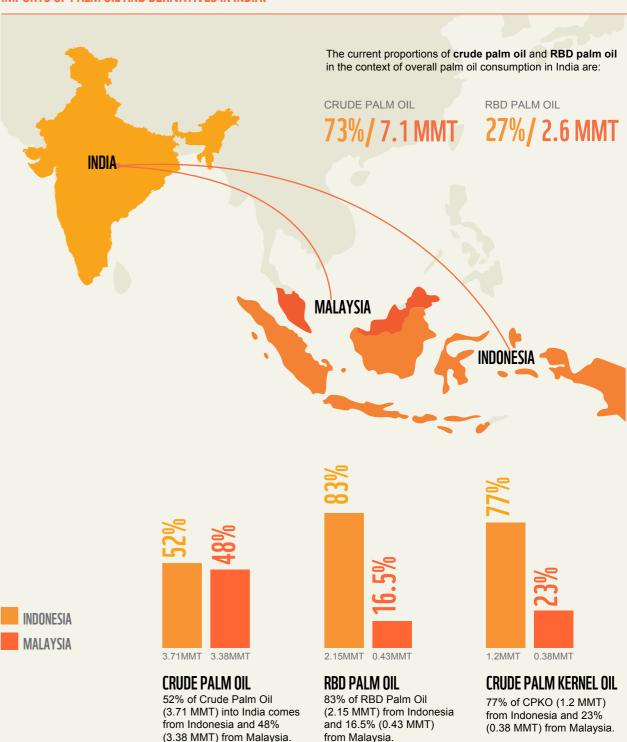
The Indian palm oil industry is primarily driven by demand created for domestic consumption with little or no re-export taking place. Since India is not able to meet its demand for edible oils from domestic production, it increasingly draws on imports. The proportion of imports in the total edible oil consumption has been steadily growing after liberalization of the economy in the 1990s, accounting for close to 71%as of 2016-1711. Palm oil, being cheap and versatile, makes up about 62% of imported vegetable oil volumes12.

Figure 2: Import volumes of different edible oils into India (Volumes in MMT)



The gap between demand and supply is expected to widen further as domestic production is unlikely to keep pace with India's growing population and rising incomes and consumption levels, driving a continued reliance on imports. Palm oil is expected to continue to dominate the overall mix. At current consumption levels, palm oil represents 44% of the total oil consumption in India, amounting to 9.75 MMT in 2016. Extrapolating this share to India's projected total vegetable oil demand for 202513 - around 27 MMT - the expected volume of palm oil use at this time will be around 11.3MMT.

IMPORTS OF PALM OIL AND DERIVATIVES IN INDIA.



Source of data - USDA, 'Oilseeds India Report', 2016-2017.



The factors that have made palm oil such an economic success have also brought with it well-documented environmental and social challenges. Most prominent among these are issues of production, linked to the clearing of tropical forests and peatlands, and the impacts this has had on both the environment and local communities.

In recent times the expansion of palm oil cultivation has driven deforestation at unprecedented rates. The area of oil palm plantations has increased from 0.5 MHA in 1985 to 20 MHa currently and is projected to reach 25 MHa by 202514.

Aside from the clearing of forest lands, one of the most visible impacts of expanding oil palm and other plantation crops has been the smoke haze which blankets parts of Southeast Asia on an annual basis. The haze is generated by the deliberate burning of forests as a rudimentary way to clear land. 2015 saw a particularly acute haze episode - a total of 20 million people were affected in Indonesia alone¹⁵. The haze is representative of larger more chronic problems with linked to the palm oil sector and underlines the need for urgent action to address its environmental and social impacts.

Environmental Impacts

The environmental impacts of palm oil production and trade centre on large scale destruction of tropical rainforests, through logging or burning, to make way for plantations. This has severe implications for local ecology and the global climate.

Ecosystem destruction and associated biodiversity losses:

More than a third of large-scale oil palm expansion between 1990 and 2010 has contributed to forest cover loss (about 3.5 million hectares in total) in Indonesia, Malaysia and Papua New Guinea¹⁶. Endangered species like the Orangutan, Sumatran Tiger, Javan Rhinoceros, Pygmy/Borneo elephants have seen their numbers decline due to a decrease in habitats as forests make way for plantations¹⁷. The Indonesian province of Riau has seen some of the highest rates of deforestation in the country, with a loss of 65% of forest cover between 1982 to 200718 due to conversion for oil palm and other plantation species. Kalimantan (Indonesia Borneo) has also seen large scale forest losses, with 56% loss of forest cover between 1985 to 2001, attributable to plantation crops including oil palm. 19,20 Plantations disrupt natural stretches of contiguous habitat needed for wildlife and can lead to an increase in human wildlife conflict.



Translocating wild Sumatran elephant (Elephas maximus sumatrensis) from villagers' plantations in Lampung, Indonesia



Burning the rainforest to clear land for oil palm trees (Elaesis guineensis) plantations near the Bukit Tigapuluh Nature Reserve, Sumatra, Indonesia.



15% of GHG emissions result from land use change.

GHG emissions from clearing forests and draining peatlands:

More than 15% of global greenhouse gas (GHG) emissions result from land use change²¹. Forest burning to clear land for planting oil palm and other plantations is an annual event. Draining and burning of carbon rich peatland areas also causes the release of significant volumes of sequestered carbon, which adds to the level of GHG emissions. Activities associated with forest clearing have contributed to Indonesia becoming one of the highest GHG emitters at a global level.22



Indiscriminate use of fertilizers and pesticides impacts local ecosystems.

Ecological effects from use of agricultural inputs and fertilizers:

Although oil palm cultivation requires less agricultural inputs like fertilizers and pesticides compared to other oilseeds, the issue of indiscriminate and unbalanced use of these inputs can still impact local ecosystems. Depletion of the water table, leaching of chemicals into groundwater sources, runoff into water bodies leading to eutrophication and hypoxic conditions, change in soil pH and fertility are some of the more significant environmental impacts of excessive use of agricultural inputs. Many smallholders are not sufficiently versed with farming techniques that optimize use of these inputs.



Water footprint of palm oil production:

Oil palm requires precipitation/water throughout the year on a consistent basis to be able to thrive. However, in regions where natural precipitation is not available throughout the year, artificial irrigation is used, especially in areas that do not have the right climate or soil. The tapping of groundwater and natural water bodies for irrigation purposes has negative implications on the availability of water for other services.

16 | Palm Lines: Envisioning a sustainable future for the Indian palm oil industry.

COVER LOSS BETWEEN

1990 AND 2010.

Social Impacts

The sector is also not without its human impacts and while much is made of the economic benefits of oil palm cultivation, there are serious social challenges associated with its expansion as an industry. Some of the major social impacts of palm oil in producer countries and regions are listed below:



Negative impacts on traditional livelihoods have been reported as a result of expanding oil palm plantations.

Displacement of indigenous people:

A significant proportion of populations in rural Indonesia have traditionally lived off natural resources available in forests and participate in traditional oil palm cultivation to sell off the FFBs (Fresh Fruit Bunches) to companies owning mills. However the growth of the sector has seen a large number of conglomerates and multinationals aggressively acquire land for captive plantations²³. These acquisitions have had allegations of violence, bribery, forced evacuation, and corruption, undermining the rights of indigenous people and compromising their livelihood sources²⁴. Locals have reported negative effects on their livelihoods with traditional activities hampered by the growth of oil palm plantations.



Labour rights have become an issue linked with the expansion of the industry.

Plantation and mill worker rights:

Although the degree of mechanization in the palm oil sector is increasing, it is still very low compared to other oil seeds due to the need for careful handling of FFBs. This means the sector is very labour intensive and employs millions in plantations around the world. It is also heavily reliant on undocumented migrant labour. As a result labour rights have become an issue linked with the continued expansion of the industry, with below market wages, occupational health and safety issues, basic healthcare and sanitation and discriminatory practices being some of the key issues raised by workers and labour rights organisations^{25,26}.



Smoke inhalation from forest fires causes a range of health impacts.

Health impacts from haze/smoke from burning forests and peatlands:

The issues with haze caused by forest burning are well documented in the media. Smoke inhalation causes a range of health effects, especially smoke from improper combustion of carbon rich matter. Local people working in the midst of these conditions often face respiratory diseases and complications. Apart from local people, nearby countries like Singapore are affected too²⁷. These health conditions brought about by pollutants in smoke add to the costs of providing healthcare and reduce the overall quality of life of the affected.



Motorcyclists in heavy haze. Near Tanjung Puting National Park, Kumay, Kalimantan, Indonesia.

The growing sustainable palm oil agenda

Over the last decade these environmental and social challenges facing the palm oil sector have translated into growing pressure on producers and users from a range of stakeholders including NGOs, consumers, companies, financiers and, increasingly, governments. There is a growing acknowledgment that the worst practices in the industry are unsustainable.

A handful of companies and NGOs are driving a progressive agenda to promote best practices, but significant issues remain. Sustainable practices are far from mainstream and continue to face challenges from powerful interests.

What has emerged are a series of approaches ranging from voluntary standards, regulation, and corporate commitments to traceable and sustainable sourcing. These are elaborated upon on in the Appendix to this report and summarized below:

DEVELOPMENTS IN THE SUSTAINABILITY AGENDA



THE ROUNDTABLE ON SUSTAINABLE PALM OIL (RSPO):

A multi-stakeholder platform to promote the adoption of palm oil produced using economic, social and environmental principles and criteria. RSPO NEXT is an advanced standard for companies who source only CSPO (Certified Sustainable Palm Oil) and want to move beyond the basic RSPO norms. It is the highest RSPO standard.



FINANCIER COMMITMENTS:

Through the BEI (Banking Environment Initiative) a group of banks have made a commitment to deforestation free supply chains in the context of palm oil.

The SCC (Soft Commodities Compact) was created as a joint initiative between the BEI and the CGF, to facilitate transformation of supply chains towards sustainability.



CORPORATE COMMITMENTS AND SUSTAINABLE PROCUREMENT:

Public commitments by brands such as Unilever, Procter & Gamble, Nestlé have emerged, aiming to achieve certification/traceability/deforestationfree procurement of palm oil.



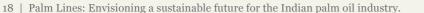
CORPORATE AND INDUSTRY FORUMS FOR SUSTAINABLE PALM OIL:

Industry based groups such as the CGF (Consumer Goods Forum), Tropical Forest Alliance and SPOM (Sustainable Palm Oil Manifesto) are examples of industry responses to tackle the issues associated with the palm oil supply chain in a collective manner. POIG (Palm Oil Innovation Group) strives to set the benchmark for best practices in palm production.



NATIONAL AND INTERNATIONAL FRAMEWORKS:

Malaysia and Indonesia have looked to develop their own national sustainable palm oil frameworks to respond to criticism and also the growth of RSPO. Some importing countries have official commitments. The Amsterdam Declaration and New York Declaration on Forests were two major announcements linked to national initiatives on deforestation and supply chains.



WWF'S POSITION ON THE REQUIRED CHARACTERISTICS OF SUSTAINABLE PALM OIL INITIATIVES

For any sustainability standard or certification scheme to be credible and effective it should, amongst other things:

- Focus on minimising or eliminating important negative environmental and social impacts, as well as creating positive environmental, economic and social outcomes,
- Provide transparency through meaningful stakeholder participation in decision-making and public reporting on certification progress and outcomes
- Require independent, third-party verification, certification and accreditation,
- · Require truthful claims, and where applicable, traceability,
- Be committed to continuous improvement.

In palm oil, the RSPO is the only initiative that meets these principles and which has sufficient size and influence to achieve the necessary change.

WWF supports the RSPO and its certification standard and system as the foundation of a sustainable palm oil industry and as the best opportunity for global transformation, while recognising that the scheme must improve in certain areas.

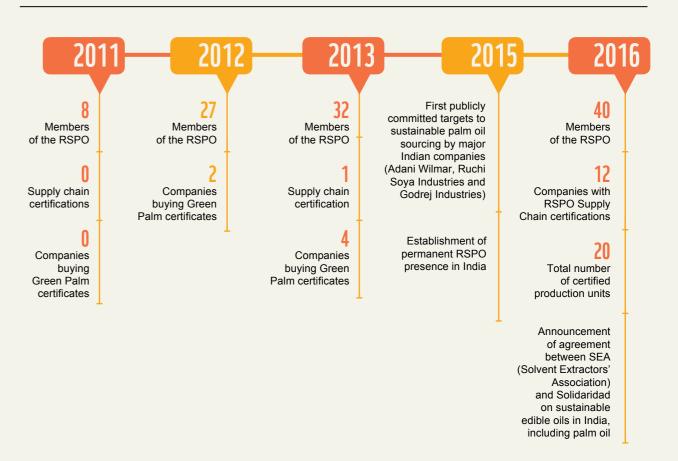
Progress on sustainable palm oil in India

Within the context of these increasingly advanced efforts to address high-impact, deforestation-linked commodities, lies India – a key player, given its huge and increasing demand for palm oil, but which to date has lagged in a concerted effort to address its environmental and social footprint. A spate of company commitments and the announcement that an Indian standard for sustainable palm oil may be developed, signal a willingness on the part of industry to address sustainability issues.

The leadership of a small group of multinational companies, foreign direct investment into local companies, advocacy by NGOs and the expansion of Indian companies into offshore markets have been key drivers behind a gradual shift to better practices²⁸. WWF-India and others have been at the forefront of raising awareness of the sustainability issues linked to palm oil and seeking to find solutions that meet the particular characteristics of the local market.

Awareness about the issues connected to unsustainable palm oil has increased markedly. All CEOs of major Indian buyers of palm are aware of both the sustainability issues linked to palm oil and solutions such as the RSPO framework, and have directly engaged, with varying levels of interest, with WWF-India and other NGOs. The nature of discussions around sustainability has shifted over a short period and is underlined by progress on other fronts (see below). Awareness has been established at the corporate level. What is required is faster, more concerted action.

RECENT PROGRESS ON PALM OIL SUSTAINABILITY IN INDIA



2015 company reporting to the RSPO showed that for the first time, major Indian palm oil companies had made commitments to sustainability. A summary of RSPO commitments by key Indian players is captured below²⁹:



- Adani Wilmar Commitment to 100% certified supply chains and handling full CSPO by 2026.
- **Ruchi Soya** Committed to 100% supply chain certification by 2020.
- Godrej Industries Commitment to 100% certified supply chains and full CSPO for premium product ranges by 2020 as well as 20,000 MT certificates by 2018.
 Also committed to better production for domestic plantations³⁰.
- VVF India Committed to 100% supply chain certification by 2024.



Aerial view of palm oil plantation on deforested land, Sabah, Borneo, Malaysia.

Not enough progress, and too slow?

However, despite the positive momentum highlighted above, the shift has not been fast and deep enough to effect change on the ground. The rise in supply chain certifications has not corresponded with an increase in the actual volumes of certified sustainable palm oil demanded or procured by the market. RSPO Credits (formerly Green Palm certificates) were purchased sparingly pre-2015 by Indian companies and virtually ceased post 2015-16, despite the low cost of the certificates (USD 2 in May 2016 for Palm Oil and USD 18 for Palm Kernel Oil).

It is also too soon to asses if a recent announcement by the SEA (Solvent Extractors' Association) regarding the development of an Indian national standard for sustainable palm oil will deliver significant improvements in the sector.

The reluctance on the part of companies to fully address their supply chain impacts is accompanied by a range of reasons, most of which point to certain characteristics of the Indian market which is vastly different to those in Europe and North America where physical supply of CSPO has had greater uptake.

The next sections detail out the dynamics of the Indian palm oil sector with a view towards identifying the major barriers to mainstream adoption of sustainable palm oil and propose a viable way forward towards the sustainable growth of the industry.



Burnt down Sebangau National Park peat swamps, Central Kalimantan, Indonesia.





India has the potential to play a significant, if as yet fully realised, role in driving sustainable practices in the palm oil sector. High demand from India is one of the main drivers for the expansion in oil palm plantations in producer countries like Indonesia, Malaysia and elsewhere.

Although the environmental and social impacts associated with oil palm production are not directly felt in India, the size of import volumes makes it a key influencer in the industry. Indian buyers can play an important role by demanding responsibly produced palm oil from their suppliers and contribute to sustainable growth of the industry.



5-10%
OF TOTAL PALM OIL:
PERSONAL CARE &
COSMETICS.

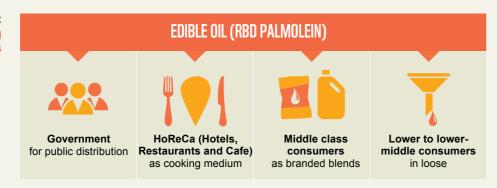
The palm oil value chain and market structure in India

The Indian palm sector is primarily driven by large volumes in the food and cooking oil sector, with smaller volumes directed to the consumer goods segment. The market structure is summarised below:

- Food and cooking oil uses: 90% (approx.)
- Personal care and cosmetics: 10% (approx.)

A significant percentage of Indian consumers buy palm oil 'loose' without any brand association. This is in contrast to European and American markets where palm oil and its derivatives are used in processed and packaged products in the edible consumer goods market, as well as the cosmetics and lifestyle product categories.

Figure 3: Major cooking oil users



The cooking oil segment is primarily accounted for by commercial establishments, government procurement and usage in low to middle income households. The government also procures imported palm oil via its trading agencies in bulk for distribution/sales to lower income consumers at subsidized rates in the interest of food security during periods of price inflation for cooking oil.³¹ It is also distributed via PDS (Public Distribution System) in some Indian states as a food security measure for economically weaker sections of society.^{32,33} In the situation of serious price rises for cooking oil, the government intervenes by purchasing RBD (Refined, Bleached and Deodorised) and CPO (Crude Palm Oil) through its own trading agencies and distributes it to states with large vulnerable populations³⁴.

The high-volume, low-margin nature of the Indian vegetable oil market means that it is necessarily dominated by a handful of companies. In recent times there has been further consolidation in the sector in an attempt to achieve economies of scale.



Large volumes of palm oil are sold in bulk and blended form as cooking oil.

Recent trends in the Indian market:

At a macro level the Indian market is subject to increasing modernisation, consolidation and changing investment patterns. Companies are no longer solely focused on domestic markets but increasingly looking abroad for opportunity. In recent times these changes have included:

Changing regulatory environment to boost acreage and production in India: 2015 saw a liberalization of the rules on investments by foreign firms into plantations³⁵. The changes allow direct capital investments into oil palm and other plantation crops like rubber, cardamom, coffee and olive oil³⁶, which in theory should boost the prospects of increased production capacity. The oil palm sector has not seen a great deal of interest from foreign concerns with the land ceiling laws stated as the primary barrier to large scale investments, but as of April 2017, the Land Ceiling norms have been relaxed to attract greater investment from larger players in India and abroad, which could theoretically boost acreage and output of palm in India³⁷. These initiatives are part of the Modi government's renewed efforts to reduce India's dependence on imported edible oils³⁸.

Offshore expansion / New frontiers of production: India has emerged as a player in the acquisition of land for plantations and mills overseas. West Africa is a preferred destination due to the ease of land acquisition and favourable conditions for oil palm to thrive. To illustrate the point, 3F Industries has sought to acquire 40,000ha of oil palm plantations in Gabon in recent times.³⁹

Foreign market exploration for the FMCG sector: Indian companies have been increasingly looking towards foreign markets in order to achieve organic growth. This is especially noticeable in developing markets such as Africa⁴⁰.

Distinct characteristics of the Indian palm oil market: Perceived barriers to sustainability

The unique nature of the palm oil sector in India and the significant differences from traditionally brand-focused, FMCG markets in European and North America means that tailored approaches are needed to enhance the prospects of increasing the uptake of certified sustainable palm oil in the country.

Palm oil lies at the crux of India's edible oil market and the challenge to provide affordable food to a rapidly growing population with limited productive land. The need to strike a complex balance between achieving reasonable food prices for the consumer (many of whom remain around or below the poverty line), reducing import costs, and supporting domestic production capacity and farmers in India in such a way that they can economically compete with their peers in Malaysia and Indonesia, defines market dynamics and policy.

Today tariff structures and price continue to influence consumption patterns among the different vegetable oil options but socio-economic aspects such as income, cultural preferences, an increased focus on personal health and regional factors add to the complex interplay of different market forces.

Consumption patterns also depend on the category of users, with mass market commercial establishments preferring palm to more expensive alternatives like sunflower and soyabean oils, as do lower and lower-middle income groups who have limited spending power. Higher income demographic groups typically opt for other oils generally perceived as 'premium' and healthier, like sunflower or rice bran oil.

Adding further complexity is a huge market for blended oils, which contain a mixture of different vegetable oils, mostly with palm oil. Due to the cultural factors mentioned above, blended oils may not actively indicate the presence of palm oil in product packaging.

These factors are often cited as reasons for deferring efforts on sustainability by companies. The most common reasons for this lack of initiative on sustainable palm oil are elaborated upon below.

'THE COST IS TOO MUCH'

One theme that emerges in almost every discussion related to the lag in uptake of for certified sustainable palm oil is around USD 30 per tonne of crude oil. The refined vegetable oil sector, by far the largest segment in the market, deals on high volumes,

Nevertheless, the vegetable oil market is by no means uniform or static. Increasingly big refiners are moving away from oil sold 'loose' to actively marketing 'premium', packaged and branded oils. Here margins are higher, brands are at stake and customer expectations differ. Currently 'health' is the defining characteristic of advertising campaigns, but it could be expected that in time sustainability factors find a place in this higher-end bracket of the cooking oil market.



Brands have been known to balk at paying any of the additional cost and there have been reported cases where delivery of CSPO to brands occurred without any of the additional cost being recouped by manufacturers.

The second major palm oil segment, FMCG, experiences a different cost barrier linked to sustainability. Whilst factors like higher end-product margins, brand risk and competition provides room for more strategic decisions on sustainability in this sector, the longer length of the FMCG value chain (as compared to the vegetable oil market), means that there is an accumulation of a sustainability premium such that ultimately the end cost of CSPO to the manufacturer (and consumer) becomes materially more expensive, especially for products that contain a high proportion of palm oil and/or derivative products.

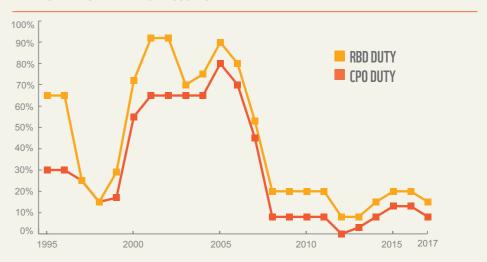
This premium is particularly prevalent in India due to the relative novelty of certified palm oil derivatives. For FMCG manufacturers in a competitive, cost-sensitive market where consumers are largely unaware of eco-labelling, it becomes difficult to pass on any part of the cost to consumers. Brands have been known to balk at paying any of the additional cost and there have been reported cases where delivery of CSPO to brands occurred without any of the additional cost being recouped by manufacturers. Such instances erode progress in the market

'WE NEED SUPPORT FROM THE GOVERNMENT'

Companies have often cited a lack of policy support as a reason for their reluctance to purchase certified sustainable palm oil. A combination of various policies underpins much of the market dynamics seen in the vegetable oil market including palm oil but none of them expressly address the issues of sustainability.

Import Tariffs: On the import side, a set of tariffs are in operation which play a key role in determining the price of both crude and refined palm oil. Vegetable oil tariffs were high before economic liberalization occurred in the 1990s, after which there was a decreasing trend. Tariff regimes reflect the political and economic priorities of the government and are used to balance protection for domestic farmers and refiners, and the cost of food and rate of inflation for consumers.

PALM OIL IMPORT TARIFFS - 1995-2017



The general swing towards dependency on imported products has continued, with tariff regimes hitting 0% and 5% for crude and RBD respectively in 2012. This has also been accompanied by poor capacity utilization in the processing sectors as production costs became uncompetitive compared to cheap imported palm and soybean oils. The last 3 years have seen a gradual increase in the duties for both crude and refined, culminating at 7.5% and 15% at the time of publishing41.

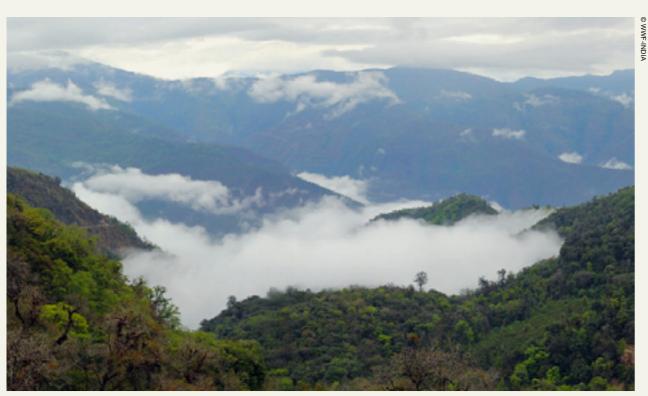


Palm oil lies at the crux of India's edible oil market and the challenge to provide affordable food to a rapidly growing population with limited productive land.

sustainable palm oil in India is the additional cost. The 'premium' in the Indian market fine margins and often sells unbranded or branded cooking oils to commercial or low income buyers. In this segment of the market, the cost implications of even a small increase in per tonne are significant. Anecdotally, one major refiner indicated that a margin of around USD 0.10 per tonne was the maximum it was willing to accommodate to cover any expenses linked to sustainability.

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Oil palm expansion in the North East states of India threatens pristine natural forests.

Domestic production: The need to energize domestic oilseed production has been a priority for most governments, at least for the last few decades. The current government has stated its desire to ramp up domestic production in India through an increase in plantation acreage and yield, and better capacity utilization in domestic processing units.

There are a multitude of central and state government programmes and schemes to increase overall output of palm oil through the expansion of planted area. These include government financial incentives and also encouraging private sector players to inject capital into the sector and work with farmers. Programmes like OPAE⁴² (Special Programme on Oil Palm Area Expansion) and OPDP (Oil Palm Development Programme) aim to increase acreage through incentives, subsidies and schemes like accelerated depreciation, soft/easy loan facilities, technical assistance and other such policy initiatives. States such as Andhra Pradesh and Kerala have already started increasing acreage and have seen increased production in the last 5 years or so.^{43,44,45}

Rules and regulations for domestic production have also been changed to reflect the increasing need for greater domestic oil output. The period from 2015 to 2017 has seen rules for FDI (Foreign Direct Investment) in palm oil relaxed significantly to allow 100% investment as well as relaxed land ceiling norms for companies.

Domestic oil palm cultivation is dominated by Ruchi, 3F Industries and Godrej Agrovet. Production models typically involve smallholder farmers and joint efforts to improve productivity in a sector which has traditionally struggled against unfavourable climatic and geographical conditions for oil palm cultivation.



There is a growing risk that expanding oil palm cultivation in India will lead to loss of natural forests, especially in the North East states.

There is a view among industry members, especially those involved in oil palm cultivation, that the Indian sector is inherently more sustainable than elsewhere given that, in the main, forest conversion has been avoided when establishing smallholder farms. Increasing domestic production is seen as having both economic and social benefits, and also reducing dependence on more environmentally and socially problematic sources of palm oil offshore.

This rather limited argument means government and industry point to efforts on domestic oil palm production as a contribution to the sustainability effort; an assertion that generally fails to recognise the wider and more serious impacts of huge import volumes. There is also a growing risk that the push to expand oil palm cultivation, combined with relaxed land-holding laws could lead to primary forest conversion and other impacts in environmentally sensitive areas of the country such as the North East, coastal Orissa and the Andaman Islands.

In general, it is difficult to see domestic oil palm as constituting a significant offset to imported palm oil. If sustainability concerns within the sector are to be addressed, the policy focus must address the environmental and social impacts of imported volumes. Experiences in the European markets indicate that a contributing factor to the uptake of sustainable palm oil has been policy measures put in place by various countries. Netherlands, Germany, UK and France have made sustainable sourcing of palm oil a part of their national trade policies⁴⁶.



The energy sector in India is a good example of progressive and environmentally responsible policy measured.

The Indian market is not without examples of progressive environmental policy. The energy and power sectors in India are examples of change brought about by progressive measures at the policy level to address climate change and GHG emission⁴⁷. Polices and regulations to promote clean and efficient energy have been successful in increasing the penetration of renewable and green energy in India and further policy interventions are under planning⁴⁸. India's broader climate change impacts linked to the heavy deforestation impacts of its palm oil and other importing activity is not fully appreciated, however, implying there are opportunities for policy initiatives which support action on the same. These options are explored further in the next chapter and are currently the subject of further study by WWF-India.

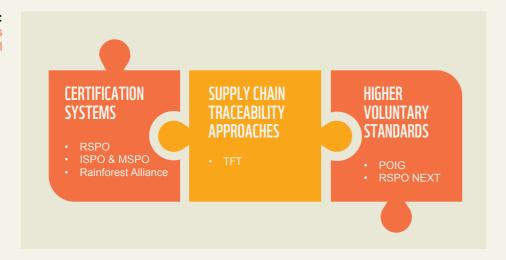
'NGOS NEED TO MAKE UP THEIR MIND'

With the growing focus on sustainability issues in the sector, a number of options are now available to companies to structure their response. These include deforestation-free commitments, traceability studies, certification under voluntary standards and the adoption of national frameworks through industry organisations. Different NGOs favour and promote different approaches. Whilst many of these developments have arisen as a result of pressure on European and US buyers in overseas markets, they nevertheless find their way to the Indian market.

The Indian palm oil value chain is complex due to the multitude of blends, derivatives, fractions and chemicals that are derived from palm and palm kernel oils. The industry is also relatively new to sustainability approaches. These factors when combined with the fragmentation of the industry in producer countries, with millions of smallholders and thousands of independent companies from different areas supplying to traders, make it a challenge for Indian companies to understand their sourcing patterns.

Genuine confusion over the multitude of approaches and the lack of coordination between organizations promoting them, especially in a market which to date has been largely indifferent to taking action, creates a significant barrier to progress and a degree of frustration in the supply chain. Indian companies are able to point to a lack of consensus about the plethora of standards and approaches to achieving sustainability. The conditions lend themselves to either total inaction or limited action based on a definition of 'sustainability' which constitutes little more than window-dressing. In the worst cases large amounts of money are spent that do little to address on-ground impacts (e.g. traceability studies).

Figure 4: Multiple approaches to sustainable palm oil



WWF believes the key is to adapt approaches from existing frameworks to ensure their suitability in the local market whilst still retaining best practice as the overall goal. It is essential that NGOs, companies and industry associations collaborate to identify a unified, coherent and synergistic approach to sustainable palm oil in India.

'CONSUMERS ARE NOT ASKING FOR THIS'

Taking the European palm oil markets as an illustrative example, it is clear that a combination of awareness among consumers and commercial concerns linked to brand risk was critical in the industry's move towards sustainability. The uptake of sustainable palm oil in Europe can be attributed partly to the campaigning and advocacy efforts of NGOs, which sensitised consumers to environmental and social issues linked to the palm oil industry⁴⁹.

The same cannot be said of the Indian palm oil market, where consumer awareness about the environmental and social issues associated with the sector is negligible, and where 'brands' in the high volume vegetable oil sector are relatively new.



Levels of consumer awareness of the environmental and social impacts of palm oil is minimal in India. As touched upon earlier, the average consumer of palm oil-based cooking oil in India is typically from lower to middle income groups, with relatively low education levels and lesser access to disposable income. This category of consumer makes purchase decisions based on cost, with other factors such as flavour, quality or health only somewhat relevant. Limited education levels also means communicating the concepts of environmental impacts, land use change, conservation and climate change is a steep challenge.



The links between Indian companies' palm oil procurement, deforestation, climate change, business continuity and long term profit are rarely computed.

'THIS IS NOT OUR PROBLEM'

paramount in the Indian context.

The majority of the environmental and social problems associated with the production of palm oil in Southeast Asia are connected to localised activities such as land clearing for plantations, the release of mill effluents back to the environment, burning and haze etc. The epicentres of the environmental and social threats are concentrated around the main production frontiers in Indonesia and Malaysia, which makes it easy for companies in India to dismiss it as a 'foreign' problem.

Awareness among small business and hospitality consumers is also expectedly low,

with cost governing purchase decisions rather than sustainability. Brand risk is limited

to a relatively small segment of the consumer goods market. In the absence of strong

consumer demand for action on sustainability, corporate responsibility becomes

The links between Indian companies' palm oil procurement, deforestation, climate change, business continuity and long term profit are rarely computed. A commonly held view in the local industry is that the deforestation and biodiversity impacts happening in producer countries are the responsibility of their domestic governments and stakeholders in those countries rather than buyers or consumers in India.

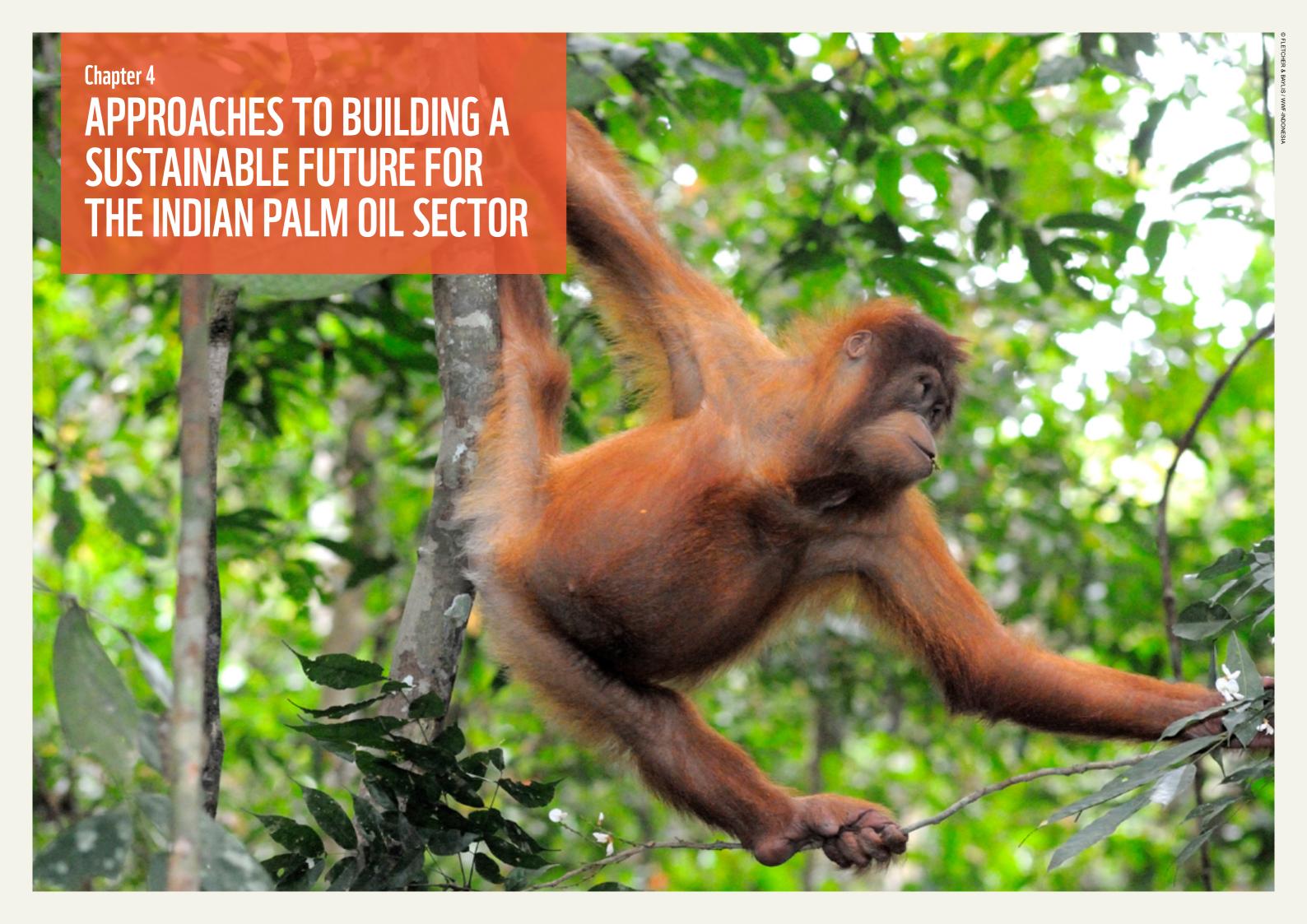
The fact that Indian companies could collectively exercise substantial leverage with sellers in Indonesia and Malaysia due to the large size of the market is known but generally not acted upon. There is a general indifference to the reputational risks connected to sourcing from high impact producers and potentially illegal operations, and a willingness to accept, prima facie, the well-funded, marketing messages of producer countries' palm oil promoter boards. The absence of a single organization or platform that can bring industry members together to coordinate efforts on sustainable palm oil needs to be addressed.



The absence of a single organization or body that can bring industry members together to coordinate efforts on sustainable palm oil will need to be addressed.

What next?

Addressing the impact of India's palm oil consumption is without doubt a critical and daunting challenge. But as described above, some signs of progress are emerging and certain characteristics of the market mean some approaches work better than others. Constructive feedback of engagement by WWF-India with industry players has helped to define some of these approaches. These are expanded upon in the following section.



This section proposes a set of approaches needed to enhance the acceptability of mainstreaming sustainable palm oil in the Indian market. Each element is addressed to a particular set of actors in the market and has been derived from discussions and interactions with industry. Each proposal is aimed at addressing a major barrier identified in the preceding chapter and an effort has been made to assess the viability of each approach with the input of industry experts in order to give a sense of priority, feasibility and efficacy.

A summary of actions for government, business and civil society is provided in the concluding section with a recommendation that collective industry action be coordinated through a permanent roundtable of stakeholders.

GOVERNMENT SUPPORT - POLICY INCENTIVES TO INCREASE THE IMPORT OF SUSTAINABLE PALM OIL



The key policy intervention mentioned by companies proposes the idea of tweaking the existing import tariff structure to incentivize the uptake of certified sustainable palm oil.

DESCRIPTION

Feedback frequently received from companies when discussing means by which to accelerate action on sustainability in the palm oil sector regularly and predictably calls for regulatory support from the Government.

The key policy intervention mentioned by companies proposes the idea of tweaking the existing import tariff structure to incentivize the uptake of certified sustainable palm oil. Potential approaches include:

- To reduce the prevailing import tariff in the case where crude and refined
 palm oil imports are certified as coming from a sustainable source. The tariff
 differential would enable companies importing sustainable palm oil to mitigate
 some or all of the extra costs of procuring CSPO and allow them to retain their
 margins.
- A corollary of the approach discussed above is the use of a 'green cess' or tax that effectively penalizes non-sustainable palm oil, artificially creating a difference in the pricing of CSPO and business-as-usual palm oil. This effectively penalizes 'bad' palm oil rather than incentivizing good palm oil.
- A third scenario envisages a tariff structure which combines both discount and cess options.

ANALYSIS

Prima facie these tariff-based approaches have the potential to address the cost barrier to CSPO and are flexible enough to tweak over time as needed. The concept of tariff-based incentives has been explored to a degree in academic publications but has not been modeled to understand their full economic and social implications.^{50,51} There exists the potential for unintended consequences and



A central challenge is that policy-based solutions may take years to implement - time which cannot be afforded to address the urgent need for action on sustainability and palm oil.

impacts on food affordability if not properly designed and implemented. Deeper investigation is underway by WWF-India to determine the exact nature of the macroeconomic implications of the proposed approaches, and Pareto efficient policy options. The findings of this research will be shared with industry for comment. Research aside, a central challenge of the policy-based approach is the likelihood it would take years to implement - time which cannot be afforded to address the urgent need for action on sustainability and palm oil.

CONCLUSION

Policy approaches may be a powerful lever for change but due to long implementation cycles, independent industry action is still necessary. Waiting for policy-based interventions to be devised and implemented will delay badly needed action at the company level. It is suggested companies accelerate commitments to sustainable sourcing whilst at the same time working to support the development of appropriate policy-based interventions.

SUPPLIER SCREENING - A LOW COST APPROACH TO SUSTAINABILITY



Supplier screening using the SPOTT tool offers a low-cost interim option for Indian palm oil buyers.

DESCRIPTION

As discussed in previous chapters the vast majority of palm oil volumes in India flow to the food and cooking oil markets. Despite awareness at a CEO-level of the environmental and social impacts of their supply chain activities, companies in this sector have been reluctant to adopt measures which add 'one rupee of cost' to their bottom lines and often point to a lack of consumer demand as an excuse for inaction.

The existing RSPO supply approaches which rely on companies making a commitment to either 1) offsets (like RSPO Credits) or 2) certified physical supply, are well known to companies but appear economically unattractive at the current time (beyond a certain progressive section of the market). Costs of certification, audits, human resources, logistics and administration are cited as the main barriers.

Q.

SPOTT, created and launched by the Zoological Society of London (ZSL) in 2014, promotes industry transparency and accountability to drive environmental and social best practice in commodity production.

In this context it is suggested, therefore, that a phased approach be taken – one that commits companies to the RSPO and defers certification and its associated costs, thus enabling even the lowest performers to start their journey to sustainable palm oil. This incremental approach will allow companies to gradually move towards full RSPO certification, with interim milestones as markers of progress.

Central to this approach is:

- 1) A long term commitment to 100% RSPO certified volumes; and
- 2) Supplier screening and engagement using SPOTT.

Using SPOTT to drive sustainable supply chains

SPOTT provides an online platform featuring a sustainability scorecard of major palm oil producers. This provides detailed information on company disclosure and commitments and their progress towards best practice. SPOTT enables palm oil buyers to support and incentivise sustainable production through more informed decision making and supplier engagement, helping them meet their own sustainability commitments.

SEARCH: Type company name to vibit their page >65% 66-33% <33% Last update: 29/06/2017 * Maximum scores adjusted							
Company	Rank	Score	RSPO member?	Headquarters	Landbank	Market cap	Total
Agropalma Group	3	84.8%	Yes, since 2004	Brazil	107,000.00 ha	Private company	97.5/115*
Anglo-Eastern Plantations pic	40	21.6%	No	UK	128,611.00 ha	\$253,725,470	26/120.5*
Archer Daniels Midland Company (ADM)	24	55.3%	Yes, since 2007	USA	12,817.00 ha	\$24,375,877,954	60/108.5*
Asian Agri Group	13	64.8%	Yes, since 2006	Indonesia	104,717.00 ha	Private company	75.5/116.5*
Astra Agro Lestari Tbk PT	32	42.7%	No	Indonesia	297,862.00 ha	\$2,280,858,944	51/119.5*
Austindo Nusantara Jaya Tbk PT	28	48.1%	Yes, since 2007	Indonesia	157,921.00 ha	Private company	57.5/119.5*
Bakrie Sumatera Plantations Tbk PT	34	33.9%	Yes, since 2007	Indonesia	154,464.00 ha	\$52,962,523	38.5/113.5*
Soustead Plantations Bhd	37	28.3%	Yes, since 2004	Malaysia	83,231.00 ha	5582,241,599	31/109.5*
Burnitama Agri Ltd	18	59.8%	Yes, since 2007	Indonesia	207,778.00 ha	5929,674,179	71.5/119.5*
Bunge Ltd	17	62%	Yes, since 2007	USA	Unconfirmed	\$10,393,000,000	40/64.5*

Screenshot: SPOTT database. Source - http://www.sustainablepalmoil.org/companies/#scores

SPOTT assesses companies against a variety of environmental and social indicators, including company progress and reporting to the RSPO; commitments to, and public availability of High Conservation Value (HCV), and Social and Environmental Impact Assessments; as well as policies and procedures on land acquisition, free, prior, and informed consent, pesticide use, and greenhouse gas emissions reduction, among many others.

SPOTT was developed with input from palm oil companies, their buyers, investors, banks and NGOs. The credibility of SPOTT is affirmed through its user base, which includes a variety of financial institutions and other stakeholders.

WWF-India recommends the following approach:

Information provided by SPOTT can be integrated into a wider sustainable supply chain strategy, in particular to identify areas of supplier risk and to frame an action plan for supply chain improvement. Companies can use the SPOTT tool to initiate a dialogue with suppliers to understand their scoring weaknesses and rapidly screen for exceptionally poor performers.

The overall approach is recommended as follows:



Join the RSPO and make a commitment to certified palm oil over a fixed time horizon.



Use the SPOTT supplier ratings to:

a. Determine the baseline weighted average sustainability performance of existing suppliers.

b. Set an average target for minimum individual supplier performance and a target for average performance of the total supplier base.

- c. Consider screening out poorly performing suppliers or alternatively, actively encourage them to improve their SPOTT score.
- d. Establish an engagement mechanism to bring strategic suppliers up to a minimum SPOTT score.
- e. Gradually increase the sustainability performance of the total supplier portfolio.

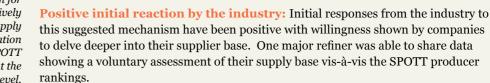


Work towards RSPO commitment.

ANALYSIS

High potential impact from a sustainability perspective: WWF-India believes this approach can be particularly effective for the vegetable oil segment where companies deal on low margins. It is flexible enough such that the approach can be tempered to ensure key suppliers are encouraged to lift performance over a defined period and not be immediately cut from the supply chain.

Absence of benefits of eco-labeling: One downside of this approach would mean that companies would not be able to access certain product and marketing claims on use of CSPO as they can under the traditional RSPO supply chain certification approach. This would limit on-product branding benefits that are tied to official RSPO approaches. However, this could be mitigated through greater transparency and public disclosure of new, progressive procurement policies and would not be a major detraction for large volume buyers.





The main call to action for companies is to actively engage 'up' their supply chain using information gleaned from the SPOTT tool to drive change at the producer level.

CONCLUSION

This approach offers a flexible interim solution to large volume palm oil buyers without placing significant upfront cost on low margin Indian businesses. The incentive for producers to lift their sustainability performance is created through a pull effect and the need to maintain their share of the world's biggest palm oil market. For Indian buyers, the simple act of supply chain screening based on a sustainability rating of producers allows the option of quickly assessing the best and worst performers, respectively. The cost of RSPO certification is deferred and decisions on supplier contracts can be taken at a pace that allows time for improvement in practices on the ground. Most importantly, the credentials of suppliers are rated within an established and well defined set of sustainability indicators, drawing from best practice in the market. The main call to action for companies is to actively engage 'up' their supply chain using information gleaned from the SPOTT tool to drive change at the producer level.

CONSUMER AWARENESS - WORKING WITH FMCG COMPANIES TO BUILD SUSTAINABLE MARKETS

DESCRIPTION



In Western palm oil markets, a good number of FMCG companies have taken action to implement timebound commitments to sustainable palm oil.

In Western palm oil markets, a good number of FMCG companies have taken action to implement time-bound commitments to sustainable palm oil. A recent review of companies in the 2016 WWF Palm Oil Buyers Scorecard showed many of these companies had made reasonable progress on stated targets. [See: http:// palmoilscorecard.panda.org]

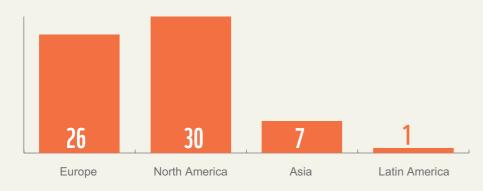
Most of these FMCG companies are multinationals that also have a significant market and brand presence in India. The likes of Hindustan Unilever, Nestlé, Procter & Gamble, Johnson & Johnson, Reckitt Benckiser all have highly prominent brands, marketing budgets and commitments to sustainable sourcing including on palm oil.

However, evidence suggests some of these brands are lagging on their commitments to sustainability, particularly in emerging markets like India and certainly do very little to engage their consumer base on sustainable palm oil. A recent study, "The Slow Road to Sustainability" has shown that the action taken by leading companies on sustainable sourcing of soft commodities has been heavily focused on North America and EU regions, with Asia being the second most ignored region after Latin America⁵².

The clear implication of these findings is that companies are not doing enough in terms of translating their global sustainability commitments in emerging markets. This lack of action by companies has also meant an absence of labeled products in the market and transformation of supply chains, making it doubly difficult to generate any kind of positive consumer attention.

The graph presented below illustrates the paucity of transformational action on soft commodity sourcing in Asia.

Figure 5: Geographic disparity in commitments by Consumer Good Forum (CGF) companies for different continents



GF COMPANIES WITH COMMITMENTS TO SUSTAINABLE SOFT COMMODITY SOURCING (BY CONTINENT)

WWF-India calls for global brands to commit to a progressive agenda in emerging markets to drive change that ultimately leads to the creation of a consumer market which rewards company action on sustainability.

Global brands are uniquely placed to sensitize a rapidly growing segment of Indian consumers on a range of issues, including palm oil. This sensitization can only benefit companies who have already made important global commitments to sustainability.

WWF's call to action for MNCs operating in the Indian market is:



Implement global commitments to sustainable sourcing in the India market.



Introduce on and/or off-product messaging on RSPO/deforestationfree palm oil.



Work with suppliers to collectively bring down the cost of certification in the supply chain and premium on CSPO goods.



Use marketing and communications channels to promote positive messages on responsible palm oil to create a domestic market for sustainable palm oil.

Indian FMCG companies have lagged behind their international peers on this issue for many years. Very few have joined the RSPO or made commitments to sustainable sourcing. This segment has traditionally pointed to the larger vegetable oil sector as the segment needing to change first, and suggested that MNCs with deeper pockets should lead. Nevertheless WWF encourages these increasingly profitable Indian companies to begin tangible steps on responsible sourcing by:

- 1. Joining the RSPO.
- Conducting a SPOTT supplier screening to remove highly problematic sources.
- 3. Committing to a time-bound sourcing plan of RSPO certified sustainable palm oil.

ANALYSIS

Multinational FMCG companies must step up in emerging markets and be willing to invest in either labeling or off-product information for consumers of products containing palm oil.

For MNCs to fully implement and promote their sustainable procurement policies in India there would be several important effects:

- 1. It would increase uptake of sustainable palm oil in India and reward supply chain actors for efforts taken to date on certification.
- 2. It would allow products to be branded and promoted in a way unique to the Indian
- 3. It would increase pressure on Indian FMCG players to step-up their efforts on palm oil sustainability.

CONCLUSION

MNCs can play a key role in driving market change in India and have the resources to do so. In a rapidly maturing market more effort on their part should be made to accelerate implementation of their sustainability commitments and to engage consumers on the same.

SUSTAINABLE CULTIVATION – COMMITMENTS TO ZERO DEFORESTATION FROM INDIAN OIL PALM GROWERS

DESCRIPTION



A major issue in terms of the prospects of cultivating oil palm in India is the absence of appropriate climatic conditions, which impacts overall yields. Expansion of oil seed cultivation by Indian companies is a national priority and the push to boost oilseed production within India offers the appeal of reduced reliance on imported material and delivering economic benefits to local farmers and refiners. Oil palm cultivation in India is particularly challenging considering it is a crop that requires particular conditions to thrive – conditions typically not found in most parts of the country. Currently Indian oil palm yields are: 2.1 MT/Ha compared to 4.2 MT/Ha and 3.7MT/Ha in Malaysia and Indonesia⁵³.

A major issue in terms of the prospects of cultivating oil palm in India is the absence of appropriate climatic conditions, which impacts overall yields. A number of schemes are in operation, tying together public and private investment and incentives to boost domestic production. In recent times there has been an important additional trend, which has seen Indian agri-business companies investing offshore to capture oil palm cultivation in markets outside of India.

However, if not managed properly, the expansion of oil palm cultivation has the potential to see Indian companies directly responsible for environmental and social impacts in high conservation value forests, in India as well as the new frontiers of production such as Africa. Indian companies' increasing role in the cultivation of oil palm either in the country or offshore, calls for a commitment to sustainable practices drawing on the strength of market leading certifications like RSPO but interpreted to suit local conditions.

WWF calls on Indian oil palm companies to:



Commit to zero forest conversion in the expansion of oil palm cultivation either in India or elsewhere.



Continue to work with farmers on agro-technologies to boost yields and efficiencies.



Support the process of a National Interpretation of the RSPO Principles & Criteria for oil palm production in India.



Uphold the Principles & Criteria of the RSPO when investing in offshore oil palm.

ANALYSIS

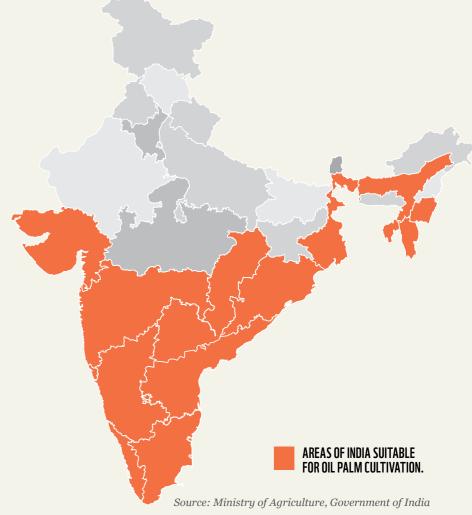
Domestic expansion of oil palm does offer something of an offset to imported volumes but is not without risks. High conservation value areas such as the north eastern states and Andaman & Nicobar Islands have been discussed as areas for oil palm monoculture and forest conversion should be avoided here.

The use of national production standards such as the ISPO (Indonesian Sustainable Palm Oil) and MSPO (Malaysian Sustainable Palm Oil) have been helpful in developing a baseline of action but are more geared towards legal compliance rather than full sustainability. To manage this situation from a sustainability perspective, WWF would recommend using standards based on a local adaptation of the RSPO Principles & Criteria. The national interpretation of RSPO standards has been successfully achieved in several big (Indonesia and Malaysia) and small (Colombia, Ghana, Cameroon, Honduras) producer countries. Similarly, Indian companies have no reason not to adopt leading market practices (RSPO) when investing in oil palm cultivation offshore.

CONCLUSION

A strong sustainability framework for Indian oil palm is needed: Indian oil palm cultivation whether in India or through investments offshore should be conducted under a sustainability framework informed by the RSPO's Principles & Criteria. Boosting domestic production must be conducted in a responsible manner which not only makes a positive contribution to the economy and farmer livelihoods but protects India's natural heritage.⁵⁴





GREEN FINANCE - DEFORESTATION-FREE PORTFOLIOS

DESCRIPTION

The role of banks in driving sustainable palm oil practices in the Indian context is relatively unexplored. International precedents show that some financiers of agri-commodities have been keen to avoid the reputational risks of financing the production and trade of high-impact commodities like palm oil. Several frameworks and initiatives have emerged which can help to guide financial sector in managing these risks.

In India, the notion of deforestation-free finance is relatively novel and few domestic banks if any have commitments on the same. Nevertheless, financiers can play an important role in influencing behaviour and through their credit or investment processes set conditions which require companies to improve their performance on sustainability.

WWF encourages financiers linked to the Indian palm oil sector to take efforts to understand the financial and reputational risks associated with unsustainable palm oil. In practical terms Indian banks can:



Become a member of the RSPO.



Conduct a portfolio review for deforestation commodities with high reputational risk (e.g. palm oil using the SPOTT framework).



Ensure clients are committed to sustainable practices as defined by the RSPO and further articulated in this report.



Set credit and investment conditions to incentivize clients' transition to better practices.



International banks need to ensure that global commitments to responsible finance are being implemented in the Indian market.



Indian banks have been slow to adopt sustainable finance approaches.

ANALYSIS

Indian banks are traditionally slow to adopt sustainable finance approaches. The banking sector in Europe and North America has increasingly grown aware of the issues associated with unsustainable palm oil production primarily due to action by NGOs and the media. Many have instituted preliminary screening policies, guidelines and norms for financing palm oil trade and similar commodities. This is yet to take root in India where commitments to sustainability in credit and investment portfolios significantly lag best practice. Local banks cite competitive pressure, lack of resources and a lack of regulatory support to explain their reticence.

However, off-the-shelf solutions are available, trade finance, particularly as it relates to agri-commodities is highly standardized across financial markets. Procedures, rules, documentation and methods for financing the trade of raw or semi-refined agri-commodities are highly transactional and typically well-established within core bank operations. Similarly, initiatives to boost sustainability within the trade of high impact

soft commodities are also highly standardized. Therefore, should Indian banks wish to improve their sustainability credentials on this important issue, the process is more straightforward and easier to implement than standards which might apply to project finance, for example. Platforms like the BEI (Banking Environment Initiative) and the SCC (Soft Commodities Compact) are readily available to assist Indian banks and can be explored immediately. The SPOTT framework outlined above also offers a credible and simple to use tool for bankers and financiers to screen their portfolio.

CONCLUSION

Indian banks are likely to be highly exposed to the trade of high impact soft commodities like palm oil. Simple steps can be taken which will not only help reduce internal risk but offer an additional push to companies who are currently lagging on their own sustainability practices.

FOSTERING INDUSTRY COLLABORATION – A SUSTAINABLE PALM OIL ROUNDTABLE FOR INDIA



Successful implementation of the proposals needs close coordination and cooperation between key stakeholders from the industry as well as civil society groups and NGOs.

This chapter has explored approaches that could potentially boost the prospects of sustainable palm oil uptake in India and outlined a course of action for different actors in the industry. However, the implementation or execution of these transformational strategies pose a significant challenge considering the size of the industry and the breadth of political, social and economic considerations.

Successful implementation of the proposals described in the above sections needs close coordination and cooperation between key stakeholders from the industry as well as civil society groups and NGOs. It is proposed that a permanent forum be established to facilitate industry collaboration across the value chain both in the domestic production and import markets to promote the increased uptake of sustainable palm oil in India.

The forum would work towards addressing the barriers and challenges to sustainable palm oil adoption by taking into consideration the unique nature of the palm oil sector in India and engaging with relevant stakeholders on a collectively agreed agenda.

The primary objectives of the forum would be to:



Establish broad-based dialogue on supportive policy environment and regulation.



Create broader industry and consumer awareness on sustainability issues and options.



Share technical best practices among stakeholders to promote better production.



Build sustainable trade partnerships through links with similar platforms in producing countries.

To ensure positive momentum it is suggested that the forum prioritize focus areas and develop and implement action plans through thematic working groups. These working groups would be formed with member representation based on consensus on the forum's priorities.



A farmer and burning forest Tanjung Puting National Park Kalimantan (Borneo), Indonesia.

© WWF



The vegetable oil sector in India has a significant role to play in driving the sustainability agenda in palm oil.

SUMMARY

India has a significant role to play in driving the sustainability agenda in palm oil, particularly by exercising its collective leverage on producer markets.

There has been definite progress in terms of awareness and understanding of sustainability issues, as reflected through positive rises in RSPO memberships and certifications in India.

The next step towards the evolution of the market is to increase the physical volumes of CSPO into the market. Written commitments to CSPO by large Indian companies such as Adani Wilmar, Ruchi Soya and Godrej Industries provide an excellent starting point in this regard.

Collectively, all stakeholders can play their part. In concluding this report WWF-India re-iterates the following actions for key industry players:

SEGMENT	INDIAN OIL PALM Producers	LARGE VOLUME VEGETABLE OIL BUYERS	FMCG (DOMESTIC)	FMCG (MNC)	BANKS
	RSPO membership	RSPO membership	RSPO membership	RSPO membership	RSPO membership
CALL TO	Responsible oil palm production - ensure no forest conversion	Im production - screening using screening using existing sure no forest SPOTT SPOTT susta		Fulfilment of existing global sustainability commitments in	Portfolio screening for deforestation commodities
ACTION	Support India National Interpretation process for RSPO P&Cs	Establish time-bound commitment to RSPO certified	Establish time-bound commitment to RSPO certified sourcing Support policy-based incentives for sustainable sourcing	the Indian market Support efforts to educate	Join the Soft Commodities Compact
		sourcing		consumers on CSPO, including product labelling, supplier engagement and communications	Establish time-bound commitment to financing of sustainable palm oil
	Certification of domestic oil palm plantations	Support policy- based incentives for sustainable sourcing			
	Ensure adoption of sustainable practices in offshore investments			Support policy- based incentives for sustainable sourcing	Support progressive financial market regulation to improve ESG risk management



WWF-India would welcome the opportunity to work with each of these stakeholders on the roadmap to a more sustainable Indian palm oil sector.



SUMMARY OF INITIATIVES ON SUSTAINABLE PALM OIL

Standards and Certification



RSPO (The Roundtable on Sustainable Palm Oil): A multi-stakeholder platform formed with the participation of industry, academia, NGOs, scientists and producers including representatives of smallholders and other relevant stakeholder groups. Its mandate is to promote the adoption of palm oil produced using a defined set of economic, social and environmental principles and criteria. Plantations and mills adhering to these principles can apply for RSPO certification upon completion of a successful audit. The RSPO mechanism also offers a range of supply chain options which allow manufacturers and retailers to claim the use of sustainable palm oil on product packaging. RSPO's CoC (Chain of Custody) mechanism requires physical custodians or handlers of certified sustainable palm oil to have their facilities and plants certified in order to ensure the product is traceable back to the certified mill. RSPO NEXT is the latest generation of the RSPO certification, taking the baseline standards set by the RSPO and adding more sustainability parameters such as inclusion of GHG reporting and effluent management. It is targeted at market leaders seeking to address a deeper set of sustainability criteria.

Rainforest Alliance

RA (Rainforest Alliance) and SAN (Sustainable Agriculture Network):

Rainforest Alliance is an international not for profit organization which promotes sustainable practices in forestry and agriculture in order to slow down and arrest the destruction of tropical forests around the globe. Rainforest Alliance works in conjunction with the SAN, which has developed standards for sustainable agripractices through multi-stakeholder consultation. Palm oil is an important focus for RA and SAN owing to the impacts on tropical forests and biodiversity at a global level⁵⁵. Companies that adhere to the standards can use the 'Rainforest Alliance certified' logo in their products, which assures customers about the sustainability of the production process. Rainforest Alliance has a chain of custody system that aims to facilitate traceability back to plantations and mills and delink production from deforestation.



ISPO is an Indonesian organization established to implement the certification standards for palm oil production set by the Indonesian Ministry of Agriculture. The ISPO standard places importance on compliance with applicable laws and regulations as well as tracking and recording GHG emissions from palm oil production. The welfare of small holders and artisanal farmers is also a key objective of the ISPO⁵⁶.



MSPO was introduced in 2013 and is defined by a set of standards for palm oil production as developed by the Malaysian government, with inputs from relevant stakeholders. MSPO focuses on four basic themes, which are 'management', 'social equity', 'environmental protection' and 'economic progress'. The MSPO, unlike ISPO, is not mandatory at the moment, with voluntary action being the focus.

Recent developments: 2015 also saw attempts being made by the Indonesian and Malaysian palm oil boards to unify the MSPO and ISPO standards into one common standard that would apply universally to all production in either country, with the objective of mutually increasing the commercial acceptability of palm oil at a global level⁵⁷. An entity called as "Council of Palm Oil Producing Countries", encompassing essential elements from both the standards was created with the objective of smallholder welfare and sustainable farming⁵⁸. The council is expected to add members from other smaller palm oil producing countries in the future. The council has planned to meet regularly during the year to push forward their objectives⁵⁹.

A comparison of the various standards can be found in the links provided under 'Further Reading' below. It is important to note that despite the positive effort to develop ISPO and MSPO, they still remain significantly weaker than market best practice.

Jurisdictional approaches to palm oil sustainability



IMPLEMENT RSPO

CERTIFICATION.

A jurisdictional certification approach was introduced by RSPO to increase the scope and magnitude of transformational impact, without the added costs of independently certified plantations.

One of the major reasons for the introduction of the jurisdictional approach is to tackle the issue of smallholders, who traditionally have lagged behind the industry in terms of adoption of RSPO.

Lack of technical knowhow and financial resources has resulted in smallholders struggling to implement RSPO certification.

The jurisdictional approach takes care of these issues by collectively certifying whole jurisdictions through a standard procedure, thereby enabling the greater participation of smallholders in the certification system.

The regions of Sabah, Seruyan and South Sumatra are the first regions to explore this approach. 60



Oil palm saplings, Riau, Indonesia.

Corporate commitments and sustainable procurement

Since the late 2000s, commitments to sustainable palm oil have been made by big manufacturers and brands such as Unilever, Procter & Gamble, Nestlé and others. Subsequently a number and variety of corporate commitments have emerged, mainly expressing a commitment to certification/traceability/deforestation-free procurement. The highest number of commitments has come from European and North American companies till date. Some of the more prominent companies who have made commitments and pledges to sustainable palm oil and/or deforestation free sourcing are mentioned below⁶¹:

Nestlé	Deforestation-free sourcing and traceable supply chains by 2020.
PepsiCo	Committed to Zero Deforestation and no development on peat as well as fully traceable supply chain to the plantation/mill level by 2020. ⁶²
L'Oreal	No deforestation by 2020 and using energy from renewable sources only.
McDonalds	Commitment to eliminate deforestation from supply chains and no development on High Carbon Stock (HCS) and peatlands.
Unilever	Zero net deforestation commitment by the end of 2020.
Mondelez	Zero net deforestation by 2020.

Other companies such as consumer goods giant Procter & Gamble, as well as food based companies like Dunkin' Donuts, Kellogg's, and Subway have made long-term commitments to buy sustainable palm oil⁶³.

Industry forums for sustainable palm oil

Industry based groups such as the CGF (Consumer Goods Forum)⁶⁴, TFA (Tropical Forest Alliance) and SPOM (Sustainable Palm Oil Manifesto)⁶⁵ are examples of industry responses to tackle the issues associated with the palm oil supply chain in a collective manner.

CGF (The Consumer Goods Forum) is a collective of consumer goods companies who have targeted the year 2020 for achieving zero net deforestation in their supply chains. The likes of Nestlé, L'Oreal and P&G are participants in the CGF.66

TFA (The Tropical Forest Alliance) is another multi-stakeholder alliance which brings governments, civil society and industry together to collaboratively work on eliminating deforestation in the production of key commodities such as palm oil, beef and pulp and paper. The likes of Cargill, Golden Agri Resources and Kellogg's are participants. Governments are represented by Norway, Germany and Ghana amongst others. Civil society organizations are also well represented in the TFA.

SPOM (Sustainable Palm Oil Manifesto) is a coalition of industry stakeholders who have pledged to take action on critical areas of their palm oil supply chains, focusing on HCS forest and peat protection, traceability & transparency, positive social and economic impacts on communities and local stakeholders. The first signatories of the SPOM charter are Sime Darby, IOI corporation, K.L. Kepong, Musim Mas and Asian Agri⁶⁷.

POIG (Palm Oil Innovation Group)⁶⁸: With the increase in commitments to RSPO palm oil, some progressive companies, especially in Europe and North America, want to go beyond the RSPO in terms of their sustainability targets and objectives. POIG is one such framework that aims to build on existing commitments and the RSPO P&Cs to take it to a higher level, focusing on GHG emissions, carbon sequestration, social issues, biodiversity, development on peat and others. The POIG charter aims at better defining and quantifying important indicators in the RSPO P&Cs under critical categories.

Investor commitments



Reacting to external pressure and wishing to avoid connections to illegal or unsustainable practices, the banking and finance sector has also acknowledged the need for better environmental and social risk management when financing palm oil production and trade. Through forums such as the BEI (Banking Environment Initiative) a group of banks have made a commitment to deforestation free supply chains. ⁶⁹ Specifically in the context of palm oil, the SCC (Soft Commodities Compact) was conceptualized as a joint initiative between the BEI and the CGF, with the objective of facilitating transformation of soft commodity supply chains towards sustainability. The SCC connects commitments under the CGF by major brands to the finance sector, represented by the BEI.^{70,71} One of the first actions taken by the SCC was the creation of a "Sustainable Shipment Letter of Credit" with the aim of distinguishing between sustainable and non-sustainable palm oil shipments based on RSPO certification.

National laws and regulations

While the response to address sustainability concerns in the palm oil sector has been led by non-government actors, a growing body of regulation in both producer and buyer markets has also emerged.

Indonesia - Along with the formation of the ISPO, the Indonesian government has also enacted a "no deforestation" law for certain regulated zones in the country, aimed at protecting the remaining primary forests and creating deterrence for others. Although the objectives of the law are well placed, it is the effective monitoring and implementation of the law that has been a major issue to date.

Malaysia - Malaysia does not have separate laws for palm oil, but the sector is governed by a handful of environmental and social protection laws. Some of the most relevant Malaysian legal frameworks for the palm oil sector are the Land Acquisition Act (1960), Environmental Quality (1978), Pesticides Act (1974), Occupational Safety and Health Act (1977), and Protection of Wildlife Act (1972).

Other commitments to sustainable palm oil

Apart from the legal frameworks introduced by producer countries like Indonesia to protect forests, there have been a number of commitments to sustainable palm oil at a national level as well.

Some of these commitments are listed below:

- Amsterdam Declaration Signed by the UK, Germany, France, Netherlands and Denmark – 2020 commitment to support sustainable palm oil in European value chains⁷².
- New York Declaration on Forests
 Pledge to half the rate of deforestation by 2020 and to completely halt deforesting activities by 2030, signed by multiple governments, corporates, NGOs and local stakeholders.
- The UK government and trade associations made a commitment towards 100% responsibly sourced palm oil by 2015. The government has led efforts to further add impetus to the pace of transformation in the country, which has had more impact than non-government supported initiatives.
- Confederation of Danish Industry has made a commitment to 100% CSPO by 2016 (including Book & Claim). Another initiative run by the Danish Chamber of Commerce covers retailers.
- FONAP was set up in 2013 to identify approaches to boost the volumes of CSPO
 in physical form in markets like Germany, Austria and Switzerland. Members from
 across the spectrum have made time bound commitments to sustainable palm oil.
- DASPO was set up in 2015 to enhance the market for sustainable palm oil in Netherlands, following the task force set up in 2010. The platforms have contributed to shifting of mindsets in the Dutch industry.
- Italy, Norway and Sweden are other countries who have national industry initiatives and platforms to increase the penetration of sustainable palm oil in the respective countries.
- In China the formation of a RSPO-led forum for sustainable palm oil in July 2016
 was the first of its kind in the country. Stakeholders from several areas of the
 industry as well as representatives of the government participated and underlined
 their desire to move the overall sustainability levels of the palm oil industry⁷³.
- In Singapore, WWF led the establishment of the Singapore Alliance for Sustainable Palm Oil – a collective of brands and NGOs seeking to push a progressive agenda on sustainable palm oil sourcing.
- India's NMOOP (National mission on Oilseeds and Oil palm) was conceptualized to increase production of vegetable oils sourced from oilseeds, oil palm and TBOs from 7.06 million tonnes (average of 2007-08 to 2011-12) to 9.51 million tonnes by the end of Twelfth Plan (2016-17).
- India's **OPAE** (**Oil Palm Area Expansion**) **Scheme** was launched to bring an additional 60,000 hectares under palm oil cultivation under the broad coverage of the OPDP programme as defined by NMOOP. The programme provides economic incentives, soft loans with low interest rates, capital equipment subsidies on irrigation and farming equipment, financial support for up to 4 years till FFBs are at an economically viable level, supply agreements, support for intercropping of complementary crops and other similar incentives. The OPAE also outlines incentives for crushing, milling and processing activities as that is a critical bottleneck in conversion of FFBs into crude palm oil.



READING For further information on the following topics please refer to the links below:

 An overview of different palm oil certification schemes including ISPO and MSPO:

http://www.sustainablepalmoil.org/certification-schemes/ and https://www.sustainablepalmoil.org/wp-content/uploads/sites/2/2015/09/ Efeca_PO-Standards-Comparison.pdf

• Details on RSPO certification:

http://www.rspo.org/certification/how-rspo-certification-works

 A recent analysis of global brands and their performance on sustainability:

http://palmoilscorecard.panda.org/

• The SPOTT toolkit:

http://www.sustainablepalmoil.org/

 A Guide to Responsible Investment in Agriculture, Forest and Seafood Commodities:

https://c402277.ssl.cf1.rackcdn.com/publications/458/files/original/2050_criteria_final_low_res_online_viewing.pdf?1348517472

 Deforestation, Forest Degradation, Biodiversity Loss and CO2 emissions:

https://www.worldwildlife.org/publications/deforestation-forest-degradation-biodiversity-loss-and-co2-emissions-in-riau-sumatra-indonesia

REFERENCES

- Oilseeds: World Markets and Trade 2016-17, Foreign Agricultural Service (FAS) United States Department of Agriculture (USDA), accessed March 17,2017, url https://apps.fas.usda. gov/psdonline/circulars/oilseeds.pdf
- 2 Developments for Palm oil in Global Market , American Palm Oil Council, accessed on 3rd April 2017, url-http://web.fedepalma.org/sites/default/files/files/2%20Karthigayen%20 S%20Kumar%20V1.pdf
- 3 Oilseeds: World Markets and Trade 2016-17, Foreign Agricultural Service (FAS) United States Department of Agriculture (USDA), accessed March 17,2017, url https://apps.fas.usda.gov/psdonline/circulars/oilseeds.pdf
- 4 Ibid.
- Figure 1: POTS seminar, Dr. Yusuf Basiron, CEO, MPOC, url http://www.mpoc.org.my/ upload/Paper_2%2o_An_Overview_of_Malaysian_Palm_Oil_in_the_Global_Oils_and_ Fats Scenario.pdf
- Table 1: Oilseeds: World Markets and Trade 2016-17, Foreign Agricultural Service (FAS)
 United States Department of Agriculture (USDA), accessed March 17,2017, url https://apps.
 fas.usda.gov/psdonline/circulars/oilseeds.pdf
- Table 2: Oilseeds: World Markets and Trade 2016-17, Foreign Agricultural Service (FAS)
 United States Department of Agriculture (USDA), accessed March 17,2017, url https://apps.
 fas.usda.gov/psdonline/circulars/oilseeds.pdf
- 5 "Economic Impacts", SPOTT Transparency Toolkit, accessed on 14th Feb, 2017, http://www.sustainablepalmoil.org/impacts/economic/
- 6 Otieno, Die, Barba, Behman, Spedbol, Rajeb and Jaton Palm oil Production in Malaysia: An Analytical Systems Model for Balancing Economic Prosperity, Forest Conservation and Social Welfare, Agricultural Sciences(2016), 7, 55-69
- 7 "Just how big is the Palm oil industry", Clean Malaysia, accessed on 20th March 2017, http://cleanmalaysia.com/2015/12/09/just-how-big-is-malaysias-palm-oil-industry/
- 8 Zulfikia Alam Shah, "Role of Oil palm in Poverty Alleviation" (paper presented at the COP 21, Paris, France, 3rd Dec 2015)
- 9 Amit Aradhey, Joan Slate, "India- Oilseeds and Products Annual 2016", United States
 Department of Agriculture, accessed on 30th Jan, 2017, https://gain.fas.usda.gov/Recent%20
 GAIN%20Publications/Oilseeds%20and%20Products%20Annual_New%20Delhi_
 India_4-1-2016.pdf
- 10 Amit Aradhey, Joan Slate, "India- Oilseeds and Products Annual 2016", United States
 Department of Agriculture, accessed on 30th Jan, 2017, https://gain.fas.usda.gov/Recent%20
 GAIN%20Publications/Oilseeds%20and%20Products%20Annual_New%20Delhi_
 India_4-1-2016.pdf
- 11 Amit Aradhey, Joan Slate, "India-Oilseeds and Products Annual 2016", United States Department of Agriculture, accessed on 30th Jan, 2017, url -https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Oilseeds%20and%20Products%20Annual_New%20Delhi India 4-1-2016.pdf
- 12 Amit Aradhey, Joan Slate, "India- Oilseeds and Products Annual 2016", United States Department of Agriculture, accessed on 30th Jan, 2017, url -/https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Oilseeds%20and%20Products%20Annual_New%20Delhi India 4-1-2016.pdf
- "Indian Oilseeds demand and supply scenario", Solvents Extractors Association, Accessed on 17th June 2016, http://www.seaofindia.com/cdn/gallery/9/9cofe187981f3f425bd284a91 2e78841.pdf
- 14 Wicke & Faaij, "Palm Oil and Land Use in Indonesia & Malaysia , Copernicus Institute, 2008, https://npnet.pbworks.com/f/Wicke,+Faaij+et+al+(2008)+Palm+oil+and+land+use+chang e+in+Indonesia+and+Malaysia,+Copernicus+Institute.pdf
- "Clear warning: What Southeast Asian haze tells us about corporate greed", Last accessed on 13th Jan 2017, http://archive.catchnews.com/international-news/clear-warning-whatsoutheast-asia-s-haze-tells-usabout-corporate-greed-1445963574.html

- 16 Palm oil & Deforestation", WWF-Australia, accessed on 11th Dec 2016, http://www.wwf.org.au/our_work/saving_the_natural_world/forests/palm_oil/palm_ oil_and_deforestation/
- 17 Chelsea Petrenko, Julia Paltseva, and Stephanie Searle, "Ecological Impacts of Palm Oil expansion in Indonesia -2016", ICCT, Accessed on 12th December 2016, url http://www.theicct.org/sites/default/files/publications/Indonesia-palm-oil-expansion_ICCT_july2016.pdf
- 18 Jessica Aldred, "Sumatran deforestation driving climate change and species extinction, report warns", The Guardian (March 2008), last accessed on 15th September 2016, https://www.thequardian.com/environment/2008/feb/27/climatechange.forests
- "Threats to Borneo forests", Priority Places, WWF Global, last accessed on 11th Nov 2016, http://wwf.panda.org/what_we_do/where_we_work/borneo_forests/borneo_ deforestation/
- 20 "Palm Oil Green House Gas emissions", 2nd GHG working group, Round Table for Sustainable Palm Oil, 13th March 2015
- 21 Robert T. Watson, Ian R. Noble, Bert Bolin, N. H. Ravindranath, David J. Verardo and David J. Dokken (Eds.), IPCC, Cambridge University Press, UK, P-375, 26th Jan 2000
- 22 Land use, land-use change and forestry, "Indonesia pledges to cut carbon emissions 29% by 2030", Reuters, The Guardian, Accessed on 2nd September 2015, https://www.theguardian.com/environment/2015/sep/02/indonesia-pledges-to-cut-carbon-emissions-29-by-2030
- 23 A.P Schrier-Ujil, M. Silvius, F.Parish, K.H. Lim, S.Rosedeana, G.Anshari, "Environmental and social impacts of oil palm cultivation on tropical peat", Wetlands International, 2010, https://d2ouvy59podg6k.cloudfront.net/downloads/the_environemental_and_social_impacts_of_oil_palm_on_peat.pdf
- 24 Obidzinski, K., R. Andriani, H. Komarudin, and A. Andrianto, "Environmental and Social Impacts of Oil Palm Plantations and their Implications for Biofuel Production in Indonesia", Centre For International Forestry Research (CIFOR), 2012, https://www.ecologyandsociety. org/vol17/iss1/art25/#livelihoodimpacts
- 25 "Forced, Child and Trafficked Labour in the Palm Oil industry", World Vision action, accessed on 5th May 2017, https://campaign.worldvision.com.au/wp-content/uploads/2013/04/Forced-child-and-trafficked-labourin-the-palm-oil-industry-fact-sheet.pdf
- 26 "Labor Risks in Palm Oil Production: Findings from multi country research", Verite International, accessed on 8th December 2016, https://www.verite.org/wp-content/uploads/2016/11/Palm-Oil-Research-Study.pdf
- 27 Emmanuel SC, "Impact to lung health of haze from forest fires: the Singapore experience", Respirology 2000 Jun;5(2):175-82, Accessed on 8 September 2016, https://www.ncbi.nlm.nih.gov/pubmed/10894108
- 28 Country data India, RSPO, 2017, RSPO member database, http://www.rspo.org/members/page/5?keywords=&member_type=&member_category=&member_country=India
- 29 Annual Communication of Progress (ACOP), RSPO, 2017, RSPO member database, http://www.rspo.org/members/ACOP
- 30 Godrej data, RSPO, RSPO member database, http://www.rspo.org/members/58/Godrej-Industries-Limited
- 31 "Indian experience on household food and nutrition security", Food and Agricultural Organization (FAO), accessed on 4th December 2016, http://www.fao.org/docrep/x0172e/x0172e06.htm
- 32 "Indian experience on household food and nutrition security", Food and Agricultural Organization (FAO), accessed on 4th December 2016, http://www.fao.org/docrep/x0172e/x0172e06.htm.
- 33 Lara Faye G. Mula, "Implications of the Public Food Distribution System on Poverty and Inequality in Andhra Pradesh and Karnataka States of India", International Crop Research Institute for Semi Arid Tropics (ICRISAT), August 2014, accessed on 13th February 2017, url http://vdsa.icrisat.ac.in/Include/Internrep/Report27.pdf
- 34 "Indian experience on household food and nutrition security", Food and Agricultural Organization (FAO), accessed on 4th December 2016, http://www.fao.org/docrep/x0172e/ x0172e06.htm
- 35 "India to allow direct foreign investment in palm oil plantations, Reuters (Nov 10, 2015), accessed on: 17th April 2017, http://in.reuters.com/article/india-palmoil-fdi-idINKCNoSZ1WP20151110

- 36 "Govt allows 100% FDI in five plantation crops", Business Standard (Nov 11, 2015), accessed on 3rd March 2017, http://www.business-standard.com/article/economy-policy/lower-import-bill-tech-infusionlikely-115111100036_1.html
- 37 "Ruchi Soya's views on Union Cabinet approving measures to increase oil palm area and production in India", press release, The Hindu Business Line (12th April 2017), accessed on 5th May 2017, http://www.thehindubusinessline.com/business-wire/ruchi-soyas-views-on-union-cabinet-approving-measures-to-increase-oil-palm-area-and-production-in-india/article9639225.ece
- 38 Mayank Bharadwaj, "Modi to bet \$1.5 billion on palm oil plan as imports surge", Reuters India (18 Aug, 2015), accessed on 5th March 2017, http://in.reuters.com/article/india-palmidINKCNoQNoJQ20150818
- 39 Emmanuel Tumanjong, "India's 3F Oil palm to Boost Gabon's Palm Oil Industry With \$200M Venture", Wall Street Journal (Mar 29, 2016), accessed on 19th Nov 2017, https://www.wsj.com/articles/indias-3f-oil-palm-to-boost-gabons-palm-oil-industry-with-200m-venture-1459269426
- 40 Lalitha Srinivasan, "Acquire to grow: FMCG companies on the prowl", Financial Express (Mar 9, 2015), accessed on 21st Sep 2016, http://www.financialexpress.com/companies/acquire-to-grow-fmcg-companies-on-the-prowl/51422/
- 41 SEA Oilseeds and soft oils market data, Solvents Extractors Association, 2014, http://storage.unitedwebnetwork.com/files/23/b5bd7b1ecf7coe6b8343e4517f5oc621.pdf
- 42 Oil Palm development policies and programmes, National Mission For Oilseeds and Oilpalm (NMOOP), 2015, http://nmoop.gov.in
- 43 "Oil palm acreage increasing in north-coastal districts of AP", HBL Bureau, Hindu Business Line, 15 July, 2016, accessed on 20August 2016, http://www.thehindubusinessline.com/economy/agri-business/oil-palm-acreage-increasing-innorthcoastal-districts-of-ap/article3606572.ece
- 44 Oilseeds Overview, Oilseeds Division, Dept of Agriculture Cooperation and Farmer Welfare, Ministry of Agriculture, Nov 2016, accessed on 7 Apr 2016, http://agricoop.nic.in/ divisiontype/oilseeds
- 45 Oil Palm Area Expansion Scheme, Dept of Agriculture Cooperation and Farmer Welfare, Ministry of Agriculture, Nov 2016, accessed on 7 Apr 2016, http://agricoop.nic.in/divisiontype/oilseeds
- 46 The Netherlands committed to 100% sustainable palm oil in Europe", Netherlands Government, 28 Jan 2015, accessed on 17th Feb 2017, https://www.government.nl/latest/news/2015/01/28/the-netherlands-committed-to-100-sustainable-palm-oil-in-europe
- 47 "Renewable Energy and Energy Efficiency Status in India", ICLEI, May 2007, http://localrenewables.iclei.org/fileadmin/template/projects/localrenewables/files/Local_Renewables/ Publications/RE_EE_report_India_final_sm.pdf
- 48 "Energy Policies in India", Bureau Of Energy Efficiency, Apr 2013, https://beeindia.gov.in/content/eefp
- 49 Sustainable Palm Commitments from MNCS, Ikea, Nestle, et al, Sustainable Brands-Supply chains, 21 Nov 14, accessed on 15th Sep 2016
- 50 "Mainstreaming Responsible Business Practices in the Palm Oil Sector in India", Center for Responsible Business (CRB), Feb 2014, url - https://www.isealalliance.org/sites/default/ files/Responsible-Business-Practices-in-the-Indian-Palm-Oil-Sector-CRB-Feb-2014-PDF.pdf
- 51 Nachiketa Das, "Creating Demand for Sustainable Palm Oil through Tariff Policies in India & Indonesia", Global Canopy Programme (GCP), Aug 2014, url http://www.gistadvisory.com/admin/pdfs/GCP_Indonesia-India-Market-Dynamics_Palm-Oil_20140221%20(1).pdf
- 52 Stephen Watson & Michael E. Solon, "Slow Road to Sustainability The sourcing of soft commodities by CGF members", WWF-International, Jun 2016, url http://d2ouvy59podg6k.cloudfront.net/downloads/wwf_slow_road_to_sustainability_final.pdf
- 53 Dr. James Fry, "Influences upon palm oil production costs", Fedepalma Congress, LMC International, Sept 2015, http://web.fedepalma.org/sites/default/files/files/1%20James%20 Fry%20Production%20Costs.pdf
- 54 Directorate of Oil Palm Research, ICAR Institute of Oil Palm Research, accessed on 17th Oct 2016, http://dopr.gov.in/
- 55 About Rainforest Alliance , Rainforest Alliance , accessed on 15th Apr 2017, http://www.rainforest-alliance.org/about

- 56 ISPO Standards, SPOTT ZSL, accessed on 6th Mar 2017, http://www.sustainablepalmoil.org/standards/#ispo
- 57 MSPO Standards, SPOTT ZSL, accessed on 6th Mar 2017, http://www.sustainablepalmoil.org/standards/#mspo
- 58 "Malaysia and Indonesia to set up Palm Oil Council", Far Eastern Agriculture, 24Nov 2015, accessed on 6th Mar 2017, http://fareasternagriculture.com/crops/agriculture/malaysia-and-indonesia-to-set-up-palm-oil-council
- 59 "Eye on Council of Palm oil Producing Countries (CPOPC): Malaysia appoints first of its three representatives for CPOPC", Khor Reports Palm Oil Blog, Sep 5 2016, accessed on 2nd Apr 2017, http://khorreports-palmoil.blogspot.in/2015/10/eye-on-council-of-palm-oilproducing.html
- 60 Jurisdictional Approach, Yohanes Izmi Ryan, Round Table for Sustainable Palm Oil, accessed on 12th June 2017, http://sustainability-college.rspo.org/wp-content/uploads/2016/11/Jurisdicational-Approach-POC.pdf
- 61 Mary Mazzoni, "3pWeekend: 10 Companies Committed to Sustainable Palm Oil", Triple Pundit, Jun 2014, accessed on 17th Jan 2017, http://www.triplepundit.com/2014/06/3pweekend-companies-committed-sustainable-palm-oil/
- 62 "Palm Oil specific Commitments", Pepsico policies document, Pepsico Inc, accessed on 13th Jun 2016, https://www.pepsico.com/docs/album/policies-doc/pwp/pepsico-palm-oil-commitment-3.pdf?sfvrsn=0
- 63 Vaidehi Shah, "RSPO sets new targets for sustainable palm oil", Eco-Business –Food & Agriculture, 20 Nov 2015, accessed on 13th Feb 2017, http://www.eco-business.com/news/rspo-sets-new-targets-for-sustainable-palm-oil/
- 64 The Consumer Goods Forum (CGF), accessed on 16th Mar 2017, http://www.theconsumergoodsforum.com/
- 65 Manifesto Carbon Stock Study, Carbon Stock Study (CSS), Jan 2014, accessed on 19 Dec 2016, http://www.carbonstockstudy.com/the-manifesto/about
- 66 The Consumer Goods Forum (CGF), accessed on 16th Mar 2017, http://www.theconsumergoodsforum.com/
- 67 Sustainable Palm Oil standards, SPOTT ZSL, accessed on 15th Apr 2017, www. sustainable palmoil.org/standards
- 68 Palm Oil Innovation Group (POIG), Sustainable Palm Oil standards, SPOTT ZSL, accessed on 15th Apr 2017, http://www.sustainablepalmoil.org/standards/#poig
- 69 Banking Environment Initiative (BEI), Cambridge Institute for Sustainability Leadership (CISL), accessed on 5th Mar, 2017, http://www.cisl.cam.ac.uk/business-action/sustainable-finance/banking-environment-initiative
- 70 Soft Commodities Compact Banking Environment Initiative, Cambridge Institute of Sustainability Leadership (CISL), accessed on 5th Mar 2017, http://www.cisl.cam.ac.uk/ business-action/sustainable-finance/banking-environment-initiative/programme/softcommodities
- 71 Documents on BEI, Cambridge Institute of Sustainability Leadership (CISL), accessed on 5th Mar, 2017 http://www.cisl.cam.ac.uk/business-action/sustainable-finance/banking-environment-initiative/pdfs/the-bei-and-cgfs-soft-commodities-compact.pdf
- 72 "Towards Eliminating Deforestation from Agricultural Commodity Chains with European Countries", Govts of Germany, France, Netherlands, UK, Norway, Sep 2015, accessed on 23rd Jan 2017, http://www.euandgvc.nl/documents/publications/2015/december/7/declarations
- 73 "The First RSPO China Forum Successfully Held Promoting the Development of Sustainable Palm Oil in China", RSPO News Network, Round Table for Sustainable Palm Oil (RSPO), 14 Jul 2016, accessed on 18th Mar 2017, http://www.rspo.org/news-and-events/news/the-first-rspo-china-forum-successfully-held-promoting-the-development-of-sustainable-palm-oil-in-china







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