# The Implementation of the Swedish Food Federation Initiative on Sustainable Palm Oil

**Monitoring Report 2015** 



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Abdul Muis Sulaiman (Masters Student intern, Uppsala University) under the supervision of Johan Anell (Livsmedelsföretagen)

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# **Executive summary**

Swedish initiative for sustainable palm oil is working towards increasing the share of certified and sustainable palm oil in the Swedish market. The initiative was initiated at the beginning of 2014 with the ambition that by 2015 the food industry shall fulfill the requirements of using solely certified palm oil according to RSPO's criteria and as far as possible use the RSPO's segregated palm oil category. The initiative for sustainable palm oil has created a platform for knowledge-base and on why certified sustainable palm oil is important.

A monitoring survey study was conducted to understand and asses how the initiative have come so far. The major trends from the monitoring survey study are as follows:

- The trend of consumed refined palm oil in Swedish food industry throughout the period of 2010 2015 that is based on RSPO certification scheme is dominated (more than 80%) by Book and Claim category. Whereas, from 2014 to 2015, there were slight increases in the Swedish food industry's consumption of Segregated (SG) and Mass-Balanced (MB) refined palm oil, in which, each of these categories rose by 4%.
- Based on the estimation of approximate uptake volume of 60,000 metric tonnes refined palm oil by Swedish Food Industry in 2014 and the monitoring survey results for the year of 2014 on the percentage of RSPO-certified refined palm oil use, we therefore estimated the uptake volumes of certified refined palm oil by Swedish Food Industry in 2014 into the following categories: Book & Claim at 55,757 MT (93%), Segregated at 1,619 MT (2.7%), Mass Balanced at 526 MT (1%), Identity Preserved at 82 MT (0.1%), and non-certified at 2,017 MT (3%).

As this is the first study on the uptake of palm oil in Swedish Food Industry, therefore, its contribution is important as a source of information and knowledge on sustainable palm oil use for food industry in Sweden.

# Background

# What is palm oil?

Palm oil is an edible vegetable oil that is extracted from the pulp of the fruit of the oil palms, primarily from the tropical palm *Elaeis guineensis*. Currently, palm oil is mostly produced in Southeast Asia. Indonesia and Malaysia account for around 85 % of the global production (Balu, 2015). It is well suited for cooking and deep-frying and it is widely used by the food industry, in among other things, in ice cream, margarine and cookies. Palm oil is also an ingredient in cosmetics, detergents, animal feed and biodiesel fuel.

Palm oil has some technical and sensory properties that make it suitable for use in food production. The oil is semi-solid in room temperature and is not affected to any great degree by rancidity; its properties contribute to retaining texture, flavor and shelf life of the product (Balu, 2015).

Food producers often use a mixture of different fats, in which palm oil can be one of them. One reason for the food industry to start using palm oil was because there was a demand for a fat that could replace the partially hydrogenated fats that contained trans fatty acids. New medical knowledge at the end of the 1990s showed that trans fatty acids were unhealthy. The best option at that time was to use palm oil which does not require hydrogenation and does not contain any trans fatty acid.

# What is sustainable certified palm oil?

Oil palm plantation development is known to have significant adverse impacts, particularly since it is grown in areas that used to be rainforests and/or situated adjacent to rainforests in tropical belt of the world. Apart from affecting the humans and wildlife that live in and around the rainforests, oil palm plantations also have some negative effects on the climate; the planting of the oil palm trees often involve practices that resulted in the release of carbon emission. Working conditions in the plantations and the use of pesticides can also be problematic. These are reasons why there is a need to improve the conditions for palm oil production. However, palm oil is an important source of income for millions of peoples, who have scarce resources and few other livelihoods. Furthermore, oil palm crops are highly productive — studies suggest that oil palm crop is about five to nine times more productive compared to other vegetable oil crops (e.g., Balu, 2015). Therefore there are several reasons to continue to use palm oil; however, the costs would be too high if we do not aim to use certified palm oil.

Roundtable on Sustainable Palm oil (RSPO) is the organization that represents various parties: NGOs, palm oil industry, process industry, food industry, retailers, and banks. The organization was formed in 2004. Together they have compiled principles and criteria for certification and the membership is increasing continuously. There are four types of RSPOcertified physical supply chain categories developed: (1) Book & Claim: the model provides tradable certificates (sold by "Green Palm") for RSPO certified oil palm to actors in the palm oil supply chains and are offered on a web-based transaction system to end-users who choose to support specific volumes of RSPO certified oil palm products; (2) Mass Balance: a model that allows a mixture of certified and conventionally grown palm oil at any stage in the supply chain, as long as overall site quantities are controlled; (3) Segregated: this model assures that RSPO certified oil palm products delivered to the end-user come only from RSPO certified sources. It permits the mixing of RSPO certified palm oil from a variety of sources, therefore, the physical oil delivered to the end-user will not be fully traceable to the specific mill and its supply base; and (4) Identity Preserved: this model provides the end-user a uniquely identifiable RSPO certified palm oil to a single RSPO certified mill and its certified supply base; all supply chain participants must ensure that the RSPO certified oil palm product is kept physically isolated from all other oil palm sources throughout the supply chain (including other RSPO CSPO sources).

Through its support to sustainable palm oil, RSPO has to date certified 12.1 million tonnes (20%) of global palm oil (RSPO, 2015). During the period from 2009 to 2015, the sales of

certified sustainable palm oil showed increasing trend and it is dominated by Book and Claim category (Fig.1).

5
4
3
2
1
2
2009
2010
2011
2012
2013
2014
2015

Segregated & Mass Balanced
Book & Claim
Total

Figure 1: Certified sustainable palm oil sales

Source: www.rspo.org

# The importance of palm oil for producing countries

Studies suggest that oil palm's origin is believed to have come from Africa (Corley & Tinker, 2003). It spread to South East Asia via human agency through trade, explorations and European colonization (Corley & Tinker, 2003). The advent of the first commercial exploitation of oil palm in the world began with experimental plots in Sumatera island (in the then Dutch East Indies, now Indonesia) as early as 1860 (Pamin, 1998). Oil palm trees were introduced into Peninsular Malaysia as plantation crops in the early 20th century (Murphy, 2014). Large-scale commercial planting started in Malaysia in the 1960s, in which, it was taken up by private plantation companies as an alternative to rubber (including by large British-owned companies such as Sime Darby and Bousted, and smaller Malaysian Chinese companies) and by government-sponsored land settlement schemes, notably those implemented by the Federal Land Development Authority (FELDA) (Cramb & Curry, 2012). Through these efforts, oil palm hectarage in Malaysia has grown from 320,000 ha in the 1970s (Sime Darby, 2009) to 5.3

million ha in 2014 (Ibrahim, Tan & May, 2015). As such, palm oil industry became a key economic growth driver in Malaysia, contributing as the fourth-largest contributor to the economy in 2014, accounting for RM66.12 billion (EUR 15.7 billion) of export earnings (Global Oils & Fats, 2015) and created direct employment for 674,029 people (Ibrahim, Tan & May, 2015) with estimated total employment at around 860,000 people including the downstream part (Sime Darby, 2009).

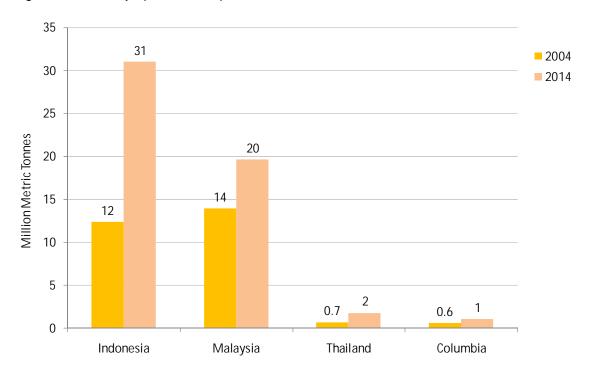
Meanwhile, World Growth report (2011) pointed out that palm oil is Indonesia's second largest agricultural product after rice paddy and has been Indonesia's most significant agricultural export in the last decade. In 2008, Indonesia's palm oil industry contributed over \$14.5 billion in revenue stemming from palm oil related products that were exported (World Growth, 2011). Furthermore, in 2013, approximately 51.42 percent (5.66 million ha) of oil palm plantations in Indonesia were owned by private plantations, 41.55 percent (4.55 million ha) by small shareholders and the remaining 6.83 percent (0.75 million ha) by Government plantations (BPS, 2015). Private plantations are the largest producers of palm oil in Indonesia, producing 15.63 million metric tonnes (MT) of palm oil in 2013 and it is followed by smallholder plantations that produced 10.01 million MT of palm oil, and Government plantations that produced 2.14 million MT of palm oil (BPS, 2015). With these significant number of palm oil productions, palm oil sector has become the driver of regional economic activities in Indonesia such as in Sumatera, Kalimantan and Sulawesi islands. Goenadi (2008) in World Growth report (2011) estimated that employment generated from palm oil production in Indonesia could potentially reach over 6 million lives.

As a result, to date Indonesia and Malaysia contributed around 85% of global palm oil production which produced around 31 million MT and 19.6 million MT in 2014, respectively (Fig.2). These productions have made these two countries combined as the largest producer and leading exporter of palm oil in the world (Balu, 2015).

# Global palm oil production and consumption

To date, Asian countries are dominating in palm oil consumption in the world; India (7.6 million MT) is the biggest importer followed by Indonesia (7 million MT), China (6.1 million MT), and Malaysia (2.3 million MT) (Fig.3). EU consumption on palm oil showed increasing trend in the last decade, for example, in 1997, EU imported around 1.9 million MT of palm oil and increased three-fold to 6.1 million MT in 2012 (Fig.3).

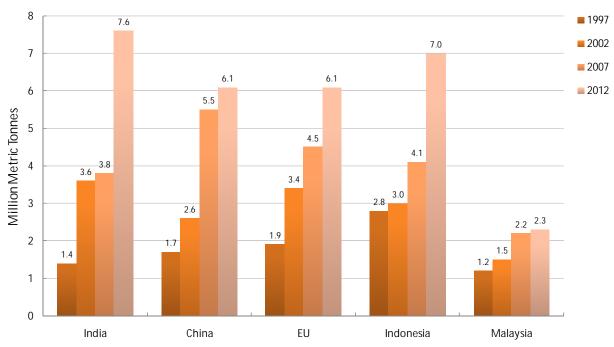
Figure 2: World major producers of palm oil



Data source: Malaysian Oil Palm Statistics 2014 in Balu, 2015

RSPO (2015) estimated that the projected global market demand of palm products would continue to grow from 51 million MT today to between 120 and 150 million MT in 2050.

Figure 3: World major consumers of palm oil



Data source:www.palmoilandfood.eu

# Swedish initiative on sustainable palm oil

Swedish initiative for sustainable palm oil is working towards increasing the share of certified and sustainable palm oil in the Swedish market. The initiative was initiated at the beginning of 2014 with the ambition that by 2015 the food industry shall fulfill the requirements of using solely certified palm oil according to RSPO's criteria and as far as possible use the RSPO's segregated palm oil category. The initiative was formed by a board decision of the Swedish Food Federation.

### The aim is to:

- Increase the use and demand for responsibly produced and certified palm oil
- Increase transparency and traceability in the supply chain
- Help the market for responsibly produced palm oil to grow

# **Methods**

Two data collection approaches were used to implement the monitoring activity: primary data collection and secondary data collection. These two methods were chosen to complement each other's strength and support each other's weaknesses. Thereby reducing the uncertainties emanated from the data and information, and increasing confidence in the results obtained.

# Primary data collection

The objective of the primary data collection is to get micro data on palm oil consumption in Swedish food industry sector based on the following categories: certified sustainable palm oil by using RSPO-certified physical supply chain, and non-certified palm oil. Furthermore, the monitoring activity also aims to get input from palm oil users on how they would support the Swedish initiative on sustainable palm oil in the future.

All of the micro data were collected through email survey method, in which a structured questionnaire was developed and consisted of three sections: background, consumption of palm oil in Sweden and support toward Swedish initiative on sustainable palm oil.

The questionnaire was developed based on several sources of sustainable palm oil initiatives frameworks such as: the Netherlands' initiative, German's initiative, UK's initiative and the Roundtable on Sustainable Palm Oil (RSPO) framework. Moreover, in order to improve the reliability of the questionnaire, a pilot test of the questionnaire was conducted in June 2015, in which, we distributed the questionnaire to companies who are members of the Task Force of Swedish initiative on sustainable palm oil. Results and feedback from the pilot test were collected and reviewed, and were used to improve the structure and content of the survey questionnaire.

Following the pilot test, the survey questionnaire was then distributed from September to October 2015 and it was sent to 84 companies who are members of the Swedish Food Federation (Livsmedelsföretagen). Questionnaire was circulated to all 84 respondents by email. Reminder emails were sent several times to select respondents who had not responded within the given time-frame. Of these 84 respondents, 21 respondents completed our survey whose data are used herein, resulting in a 25% of response rate.

Results from the survey questionnaire were tabulated in detail based on the following criteria:

- 1. Types of palm oil used: Crude Palm Oil (CPO), Refined Palm Oil (RBD), Refined Palm Kernel Oil and Palm Kernel Expeller.
- 2. Certification types of palm oil used: Book and Claim, Mass Balanced (MB), Segregated (SG), Identity Preserved (IP), and non-certified.
- 3. Support toward Swedish initiative on sustainable palm oil: policy for 100% CSPO; having a system to trace sources of palm oil purchased; and constraints to source 100% CSPO.

All of the results are presented as time-series charts and tables.

# Secondary data collection

The data on Swedish palm oil consumption and from which countries that those palm oil are imported from are collected from Statistics Sweden (http://www.scb.se/) by communicating with the Foreign Trade and Industry Indicators officer at the Economic Statistics Department (Mr. Ari Mansikkaviita, SCB, pers. comm., June 8,2015). Meanwhile, the specific data on how much volume of palm oil is consumed and what type of certification schemes are used by companies in Sweden are collected from the Annual Communication of Progress (ACOP) reports of RSPO companies members published at RSPO website (http://www.rspo.org/members/acop) and the company-based reports published at Greenpalm website (http://greenpalm.org/the-market/green-palm-members). Additionally, a few companies also provided their annual reports for our reviews.

# Results

The results from the monitoring survey of palm oil uptake in Swedish food industry sector are structured in five sections as follows.

# Swedish palm oil consumption from 2010 to 2014

The trend of palm oil consumption in Sweden (Fig.4) remained relatively stagnant from 2010 to 2012. However, in 2013 and 2014 the figures significantly rose almost by 50% compared to previous years. Malaysia contributed 56% to 71% of these palm oil imports in the last five years (Fig.5). The jump of palm oil uptake in 2013 appeared to have come from Malaysia's palm oil imports. The total volume of imported palm oil in Sweden (Fig.4) was accounted for based on several types of Combined Nomenclature (CN): crude palm oil, solid palm oil fractions and liquid palm oil fractions. Furthermore, based on its use in 2013 (Fig.6), imported palm oil to Sweden is recorded to have been used mainly for food, and also personal care and oleochemical products (97,000 MT) and for biofuel (21,000 MT) giving a total imports of 118,000 MT.

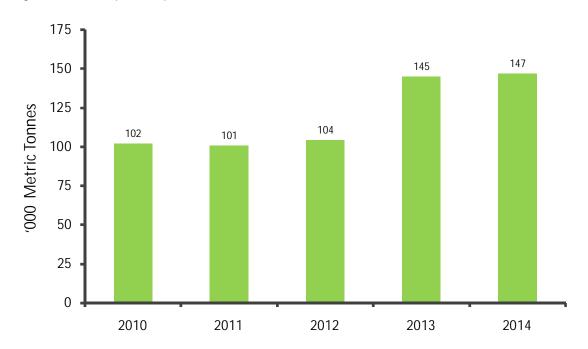
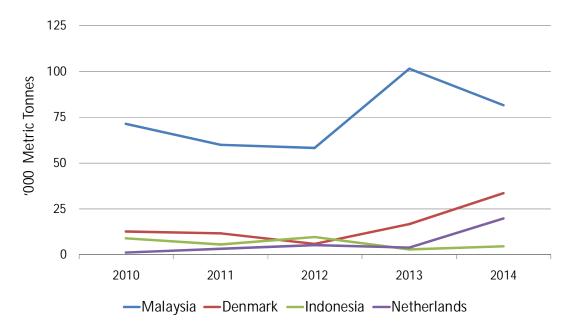


Figure 4: Total imports of palm oil to Sweden, 2010-2014

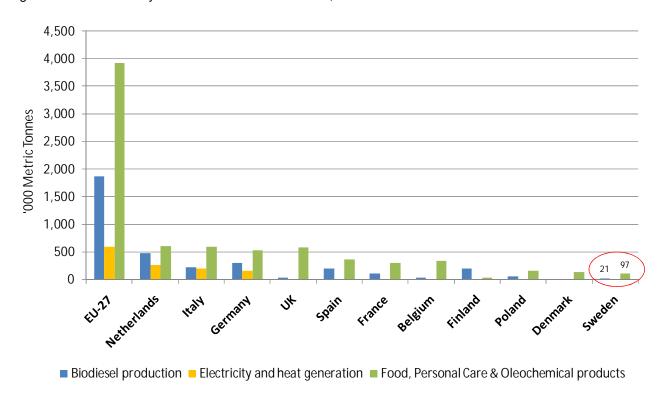
Data source: Statistic Sweden (SCB), 2015

Figure 5: Imports of palm oil from top 4 countries of consignment, 2010-2014



Data source: Statistic Sweden (SCB), 2015

Figure 6: Palm oil use by EU member-state and sector, 2013



Data source: GSI-IISD Report, 2013, in Global Oils & Fats, 2015

Trend of certified and non-certified palm oil used in the food industry 2010 to 2015

The majority of users in Swedish food industry consumed Refined Palm Oil in their products. Other palm oil products such as Crude Palm Oil, Refined Palm Kernel and Palm Kernel Expeller were also consumed but in a very small quantities by few companies that have responded to our survey monitoring. The uptake of refined palm oil in Swedish food industry that we tabulated based on responses from this survey is between 14,000 MT to about 19,000 MT during the period of 2010 to 2014.

Meanwhile, based on the GSI-IISD Report (2013, in Global Oils & Fats, 2015), the total imported palm oil to Sweden for food (mainly), personal care and oleochemical products is recorded at 97,000 MT. Therefore, our estimated survey results on the uptake of refined palm oil in Swedish food industry is approximately around 14 to 20% of the actual reported refined palm oil imports.

The trend of consumed refined palm oil in Swedish food industry throughout the period of 2010 – 2015 that is based on RSPO certification scheme is dominated (more than 80%) by Book and Claim category (Fig.7). Whereas, from 2014 to 2015, there were slight increase in the Swedish food industry's consumption of Segregated (SG) and Mass-Balanced (MB) of refined palm oil (Fig.8), in which, each of these categories rose by 4%. Furthermore, the consumption of Identity preserved (IP) category of refined palm oil remained at a very small quantities (less than 0.5%) and is relatively stagnant from 2010 to 2015 (Fig.8). In contrast, although the quantities remain low, the uptake of non-certified refined palm oil showed increasing trend throughout 2010 to 2015, from 1-2% in 2010-11 to 6% in 2015 (Fig.8).

Figure 7: Trend of Refined Palm Oil (RBD) use based on its RSPO-certified physical supply chain categories, 2010-2015

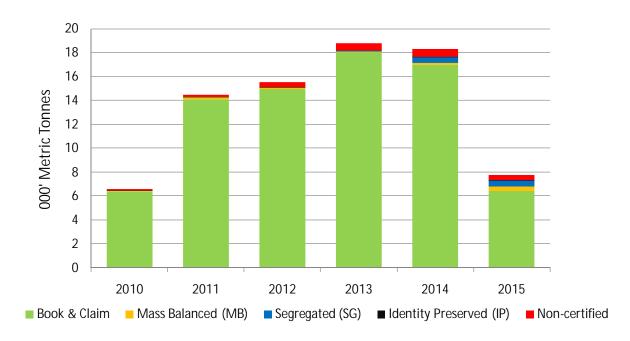
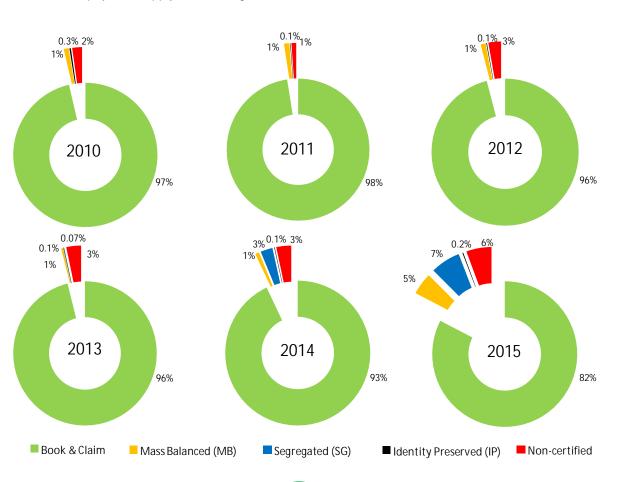
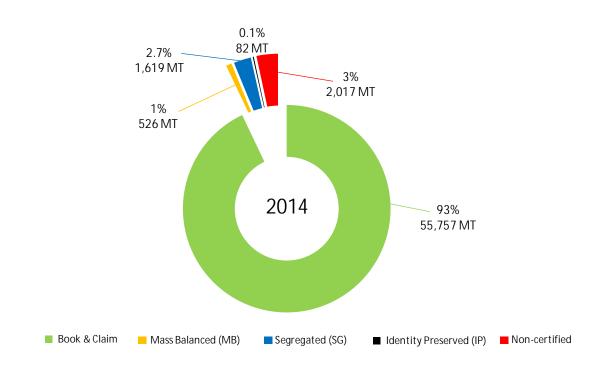


Figure 8: Annual distribution of Refined Palm Oil (RBD) use based on its RSPO-certified physical supply chain categories, 2010-2015



The data that we received in the monitoring results are not complete enough to calculate the actual uptake volumes of refined palm oil per types of RSPO certification. Therefore, we estimated these uptake volumes using a reference data for the use of refined palm oil in Swedish Food Industry as resulted from internal discussion of the Task Force of the Swedish initiative on sustainable palm oil. Using the reference data on the uptake volume of 60,000 MT refined palm oil and this monitoring survey results for the year of 2014 on the percentage of RSPO-certified refined palm oil use in the Swedish Food Industry (Fig. 8), we therefore estimated the uptake volumes of certified refined palm oil by Swedish Food Industry in 2014 as follows (Fig.9): Book & Claim at 55,757 MT (93%), Segregated at 1,619 MT (2.7%), Mass Balanced at 526 MT (1%), Identity Preserved at 82 MT (0.1%), and non-certified at 2,017 MT (3%).

Figure 9: Estimated volumes of certified refined palm oil uptake by Swedish Food Industry in 2014

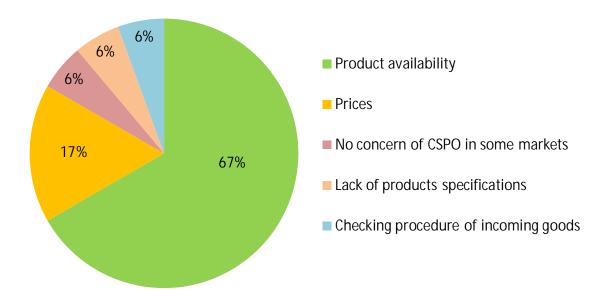


# Support towards the Swedish initiative on sustainable palm oil

In supporting the Swedish initiative on sustainable palm oil, the majority of users in Swedish food industry have committed through their policy to source 100% of Certified Sustainable Palm Oil in 2015. The future priority of their target is through the purchasing of Book & Claim, Segregated (SG) and Mass-Balanced (MB) palm oil products. These commitments will be followed up by having a system in place to trace sources of palm oil purchased.

All of palm oil users in Swedish food industry are faced with different kinds of constraints to source Certified Sustainable Palm Oil (Fig.10). One of the major constraints to source sustainable palm oil is the availability of the products (67% of respondents claimed), especially in derivative products. The second obstacle is price (17% of respondents), in which, customers are considered not interested in having higher prices (Fig.10).

Figure 10: Constraints to source 100% certified sustainable palm oil (CSPO)



# Challenges in data collection and data analyses

In terms of secondary data, there are two challenges that we faced in data collection. Firstly, there is no data available for palm oil consumption in Swedish market based on industry types, such as food manufacturer, food services, cosmetic and detergent, chemicals, livestock, and retailers. Hence, it is difficult to analyze and compare how much of palm oil

products are consumed by these sectors. Secondly, the palm oil consumption data in Sweden that is provided by Statistic Sweden may have some uncertainties due to a new regulation imposed by EU, in which, companies that import and export below a certain threshold within the EU are not obliged to report their trade statistics and thus, are risked of being under-estimated (Mr. Ari Mansikkaviita, SCB, pers. comm., June 8, 2015).

Meanwhile, in the primary data collection, we found that several companies, especially multinational companies that have production units and sub-suppliers in several countries with hundred types of products, are faced with difficulties to track down all of the palm oil products they used. Since they have hundreds of products, their difficulties rose in identifying which ingredients used palm oil components, to which products these ingredients were used in, and to which countries these products are sold to. Thus, these companies could not provide the volume of their palm oil consumption and whether their palm oil products it's certified or non-certified. Furthermore, we also found that companies that use emulsifiers in their products cannot be certain about the volume of their palm products that were RSPO certified; therefore, the volume of palm oil products that were provided by these companies are only approximate numbers.

# **Conclusions**

Drawing from four months of monitoring survey on the palm oil uptake in Swedish food industry sector, we can conclude as follows:

- The consumption share of palm oil in Sweden in 2012 is 104,000 MT (2%) compared to EU's total palm oil consumption (6.1 million MT).
- The trend of palm oil consumption in Sweden in 2013 and 2014 significantly rose, almost by 50% compared to the previous years (2010 to 2012). Malaysia contributed 56 71% of these palm oil imports in the last five years.
- Based on its use in 2013, imported refined palm oil to Sweden is recorded to have been used mainly for food, and also personal care and olechemical products (97,000 MT) and for biofuel (21,000 MT) giving a total import of 118,000 MT.
- Based on the survey, the annual consumption of palm oil products (RBD) in Swedish Food Industry sector during 2010 2014 accounted for about 14,000 to 19,000 MT. Therefore, our estimated survey results on the uptake of refined palm oil in Swedish food industry is approximately around 14 to 20% of the actual reported refined palm oil imports.
- The Swedish food industry sector uptake on palm oil products in the last five years is dominated by Book and Claim certification type, which is more than 80% share compared to other RSPO certification types, i.e., Mass-Balanced (MB), Segregated (SG), and Identity Preserved (IP). Whereas, the consumption of non-certified refined palm oil products contributed 1 6% throughout the last five years.
- Based on an approximate data on the uptake volume of 60,000 MT refined palm oil as resulted from the internal discussion and this monitoring survey results for the year of 2014 on the percentage of RSPO-certified refined palm oil use in the Swedish Food Industry, we therefore estimated the uptake volumes of certified refined palm oil by Swedish Food Industry in 2014 into the following categories: Book & Claim at 55,757 MT (93%), Segregated at 1,619 MT (2.7%), Mass Balanced at 526 MT (1%), Identity Preserved at 82 MT (0.1%), and non-certified at 2,017 MT (3%).

- In order to achieve the uptake target of 100% Certified Sustainable Palm Oil (CSPO) by 2015 in Swedish Food Industry, the Swedish Initiative on Sustainable Palm Oil need to convince all of these companies that are still purchasing non-certified refined palm oil products to adopt a truly responsible palm oil procurement policy with a tight time-bound implementation plan.
- Considering the fact that the projected global market demand of palm products would continue to grow from 51 million MT today to between 120 and 150 million MT in 2050, it is crucial for Sweden and EU to ensure that the production of palm oil would not create social, economic and ecological problems in producing countries. One way to do this is by transforming the market so that only those palm products from sustainable supply chains are accepted.

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